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**CHANGES IN WASTE UTILIZATION PRACTICES
AMONG RURAL OLD BELIEVERS
IN ESTONIA**
Master's Thesis

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ABSTRACT

Main emphasize of the current work is on the changes in waste utilization practices among rural Old Believers community. The study summarizes the essential features of modern Old Believers community. Social innovation theory and Practice theory are taken as the theoretical framework for the paper. Author assumed that Old Believers have their own historical ways of waste utilization and investigated how the process of new waste recollection system (that is considered as Social Innovation in the current paper) has been implemented among existing utilization practices. The research was conducted among rural Old Believers in the Peipus Lake region. Basic factors regarding introduction of new waste recollection system in Estonia at the state level are considered here, too, together with the statistical data that uphold the main assumption. For the investigation observation and seven interviews were conducted with the people from Kolkja, Kasepaa, Varnja and Raja.

As a result, there were found practices that have not been changed, the ones that were changed to some extent and also some new practices. Apart of that some interesting outcomes were found in the dimension of reusing materials and impact of cultural and religious traditions. Additionally, three periods of different waste management systems that the region has experienced were defined and described.

Keywords: Social Innovation Theory, Practice Theory, Waste Practices, Waste Management, Old Believers, Estonia

Table of Contents

INTRODUCTION	4
CHAPTER 1. THEORETICAL FRAMEWORK AND LITERATURE REVIEW	7
1.1 Old Believers as a Distinct Group.....	7
1.2. Social Innovation and Waste Recycling	13
1.2.1 Introduction to Social Innovation	14
1.2.2 Waste management definitions and importance	17
1.2.3 Waste utilization system in Estonia	21
1.3 Situation with Waste Practices in Estonia.....	25
1.4 Practice Theory and Waste Behaviour.....	32
1.4.1 Practice theory approach.....	32
1.4.2 Practice theory potential.....	36
CHAPTER 2. METHODOLOGICAL ANALYSIS AND RESEARCH QUESTION...	41
2.1 Research Questions	41
2.2 Methodological Approach.....	43
2.2.1 Case study	43
2.2.2 Interview method	46
2.2.3 Observation method	49
2.3 Problems with the research design.....	51
CHAPTER 3. DATA ANALYSIS AND PRESENTATION OF RESULTS.....	54
3.1 Data obtaining	54
3.2 Data Analysis	60
3.2.1 Ways of waste utilization	60
3.2.2 Perception of new waste system	77
3.2.3 Traditions related to the waste	86
CONCLUSIONS.....	94
DISCUSSIONS	98
REFERENCE LIST	103
Appendix 1. Questions for the interview with Old Believers	108
Appendix 2. Mapping of the waste facilities in four households.....	110

INTRODUCTION

Today problems of environment have become an essential part in the global agenda. Environmental sustainability is one of the Millennium Development goals raised by the United Nation¹. In the Report of the United Nations Conference on Sustainable Development in 2012 fifteen paragraphs are dedicated to the waste problems. Particularly the paragraph 218 declares “the importance of adopting a life cycle approach and of further development and implementation of policies for resource efficiency and environmentally sound waste management. [...] We call for the development and enforcement of comprehensive national and local waste management policies, strategies, laws and regulations”². I argue that for further improvements of national and local legislation tendencies and obstacles that currently exist have to be studied by academics, scientists and politicians at different levels. Social component of this problem is a part where I would like to contribute to.

The problem of waste treatment is becoming universal and it is of special concern for every state in the world, to different extent, though. For the current MA thesis I have chosen Estonia. The factors that influenced this choice are the next. First of all, Estonia is a country that belongs to my study area. Secondly, I want to investigate a case of Old Believers and the changes in their waste utilization practices after the introduction of new waste recollection system. This idea is derived from my assumption that religious and cultural traditions might affect the way of how they utilize the waste. Moreover, the statistics shows that people in that area self-estimated own waste sorting practices lower

¹ <http://www.un.org/millenniumgoals/environ.shtml>

² Report of the United Nations Conference on Sustainable Development, Rio de Janeiro, Brazil, 20–22 June 2012, United Nations

in comparison with people from other parts of Estonia. This fact strengthens my assumption implying that Old Believers might perform worse in traditional understanding of the term “waste sorting” since they have own local ways of utilization. Since sources of waste collection and the ways of its utilization differ among rural and urban population, I will take rural areas in order to make my study more certain. Also I believe that choice of rural areas will cover more types of waste (additionally to domestic waste it includes also garden and field waste) that might make the study more comprehensive and interesting. And thirdly, it is the availability of information. Estonia has been experiencing the considerable changes in waste management during the last decades that helps in providing fresh data taken both from the scientific and legislative papers and citizens’ memories.

New waste recollection system of Estonia has been implemented in 2005. After the collapse of the USSR Estonia met significant consequences of ineffective waste management of the Soviets. About 170 uncontrolled dumps and lack of waste treatment culture have become the main problems that waste environmentalists met (Ratas 2005: 128-130). First changes took place in the mid 1990s. Estonia released Waste Act and Packaging Act that had become the first legislative base. Substantial changes happened in the process of including Estonia to EU. Estonia has adopted the new waste-based legislation (the European Council Landfill Directive 1999/31/EU) and started the process of waste treatment following the high standards promoted by EU.

The final aim of this MA thesis is to find what changes in waste utilization practices happened among rural Old Believers’ community after the introduction of new waste recollection system in 2005. This question is of high importance in order to understand how useful the innovation was for this region, why these people sort waste in the way they do and how their traditions are reflected in their waste practices. Apart of that other useful outcomes can be brought. All in all, three research questions are posed:

1. How do Old Believers utilize the waste?
2. How the social innovation has been perceived by Old Believers?

3. How religious and cultural traditions and beliefs of Old Believers are reflected in their waste practices and what is the impact of traditions today?

In this paper *Practice theory* and *Social innovation theory* are taken as the base for theoretical framework. Practice theory aims to define and explain practices formation, maintenance and change. In the current MA thesis the way how people treat the waste, their motivation and tools that they use are covered by the practice theory elements. Social innovation theory explains appearance of new phenomena in everyday life. In the current research new waste recollection system is considered as social innovation.

My research methods are interview and observation. Semi-structured interview consisting of nine essential questions was chosen for obtaining information. All together seven relevant interviews have been conducted. Observation included three trips to Old Believers settlements in April and in the beginning of May. In the results four maps of waste utilization facilities in the households were drawn together with the observation of the situations on the street.

All in all, changes of Old Believers waste utilization practices will be listed that will help to understand how successful and needed new waste recollection system is for the rural Old Believers' community.

CHAPTER 1. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

This chapter represents a unity of theoretical base, empirical data, literature review and background information for the research. The narration starts from the Old Believers' description as a distinct group. Further I provide information regarding new waste recollection system in Estonia and some historical overview of environmental problems to show the way of waste management development in time. Big part of the chapter is dedicated to Social innovation theory and Practice theory that build academic base for the study.

1.1 Old Believers as a Distinct Group

Old Believers are famous as a community that keeps traditions of their ancestors along the centuries. I comprised this case into my MA thesis since I assume that Old Believers might perform different in waste sorting in comparison with other people after the introduction of new waste recollection system in 2005. Some facts that inspired me to this assumption will be elaborated in the subchapter 1.3. At the same time I assume that this performance might be related to their own waste treatment practices that came to the community from previous generations. In other words, Old Believers might not use new recollection system in the way like other people do because they have their own independent ways of waste utilization. Is it true and if yes then in what practices the traditions are represented I will investigate in the current MA thesis among the rest.

Investigation of the changes in Old Believers' practices is the goal of the current MA thesis. I start my research from the description of this community, its history, features and provide some statistical data. This subchapter aims to represent why Old Believers

is an interesting case for the study together with exploration of how distinct they are nowadays.

Who Old Believers are?

Today Estonian Old Believers represent descendants of Orthodox Christians who left modern Russian territory mainly during 1666-1667. That movement was caused by the reform in Orthodox Church in 1650s-1660s where Tsar Aleksey Mikhailovich and Patriarch Nikon introduced the reform aiming unification with The Ecumenical Patriarchate of Constantinople. The rebels who refused to apply new rules were persecuted (Zabrodskaia 2010: 553).

However, there was also considerable flow of Orthodox migrants before that, in 1638. There is no certain data regarding their number, however, it is assumed that by 1690 the number of Orthodox descendants could reach 8000 people in the territory of modern Estonia (Савихин 2005: 137-140). In spite of new wave of repressions in 1820s-1850s from Tsar Nikolas I of Russia the number of Old Believers did not drop significantly. Thus, data of 1897 census reveals that 6700 Old Believers (0,7% of total population) may have lived in the territory of Estonia. By 1934 their number dropped down by 5275 of people (0,5% of the total population).

Data about the number of Old Believers during the Soviet time might not represent the reality due to persecution of religion that often forced people to hide their accessory to the church. Nevertheless, Soviet statistics argued that in 1961 about 1600 Old Believers lived in Estonia while by 1989 their number has reduced to 600 individuals only. According to own estimates of Old Believers Estonia counted 10 000 Old Believers in pre-war time and 5000 of Old Believers live in Estonia nowadays (Russian Old Believers). However, academics suggest dividing this number at least by twice (Plaat 2010: 80-85).

In 1995 the Old Believer Congregation Union was registered in independent Estonia. It includes eleven congregations where nine belong to the Peipus Lake area, one for Tallinn and one for Tartu. The main places in the Lake Peipus area are:

- 1) Mustvee City and Raja Village adjacent to it;
- 2) Kallaste City;
- 3) the street villages of Kolkja, Kasepaa and Varnja;
- 4) the villages on Piirissaare Island (Plaat 2010: 85).

There is no generalized data regarding contemporary composition of Old Believers, but, for instance, for Peipsiaare municipality data is the next. In total 872 inhabitants live in the municipality (2009). Among them 50,6% of population is of working age, 31,5% – pensioners, 13% – schoolchildren and students, 4,5% – preschoolers (Postimees). 6% of rural population are Estonians (Credo.Ru).

How Old Believers differ?

Old Believers of Estonia represent a distinct ethno confessional community who live on the western part of Peipus Lake and try to maintain linguistic and cultural boundaries from the seventeenth century onwards. It used to be an isolated society that during almost 350 years did not assimilate with other national or religious groups (Пономарева 1999: 31). In comparison with other Orthodox Estonian Russians the impact of Estonian language and culture to their language and culture is slightly noticeable (Zabrodskaia 2010: 553). While some steps towards integration have been done successfully, full assimilation of this group to Estonian society has not happened.

First of all, the reason for that lays in a lack of Old Believers' will to make contacts with other communities. The Old Believers themselves divide people on "locals" and "strangers". By "strangers" they imply not only Estonians, but also Russians from distant settlements, Russian Novoobriadtsy³ and atheists (Credo.Ru). As a result, in the cultural terms the community of Old Believers is not that good known even nowadays.

³ One of the Orthodox branches

Chairman of the Estonian Old Believers Union Pavel Varunin explains this phenomenon in the next way:

“Old Believers community, or, as I call it, ethnic and religious community of Old Believers in Estonia, practically is not known neither by local Russians, nor by Estonians. This is not surprising, since at ancient time Peipus Lake shore was kind of "Backwater district", a place situated away from the main highways, main roads, so the information regarding us did not reach the centres. Moreover, Old Believers themselves have long been a closed community that did not very willingly accept strangers”. (Книжница Самарского староверия)

The issue of language is also quite important for Old Believers. First language of Old Believers is Russian that is not the official language in Estonia. Although most of Old Believers can speak Estonian as well /Female in 50s, T7/, they do not support the Estonian reform that aims to exclude Russian language from teaching languages at schools (Русский портал).

Developing the topic of language it should be noticed that in spite of the low integrity of the community Estonian language still impacted Russian tongue of Old Believers. Estonian newspaper “Postimees” published some Estonian words that were borrowed to Old Believers language and they are listed in the Table 1.

Table 1. Loan words of Old Believers

Word in English	Word in Russian	Word in Old Believers' Russian	Word in Estonian
mason	каменщик [kamenshchik]	мурник [murnik]	müürsepp
trowel	мастерок [masterok]	кельма [kel'ma]	kellu
christening	крестины [krestiny]	варуши [varushi]	varrud
glade	поляна [poliana]	копля [koplia]	koppel
ladder	лестница [lestnitsa]	трепк [trepk]	trepp
sausage	колбаса [kolbasa]	ворстик [vorstik]	vorst

Remarkable that Old Believers do not have complains towards Estonian government in the terms of religious freedom. According to the words of Varunin the state does not interfere into Old Believers rules and, moreover, supports financially some cultural projects and events. Importantly, that when Estonia became independent all Old Believers got Estonian citizenship without any problems. Moreover, representatives of Old Believers hold office of chairmen in the local governments.

Nevertheless, negative consequences of the USSR collapse were faced by Old Believers as well. First of all, the region suffered economically. “Русский портал” informs that due to the new border set in Peipus Lake Old Believers lost territories for fishing. A loss of huge sales market in Russia negatively impacted fishery and agriculture as well. General production of the goods in the region has been reduced.

As a consequence Estonian Old Believers had pro-Russian orientation during the early independence years of Estonia. For instance, when the discourse regarding “turn to Europe” had been widespread discussed in the late 1990s, it did not appeal to Estonian Russians who were concerned regarding national freedom (Vihalemm 2009: 109). According to the words of interviewed Old Believers most of them voted against Estonia’s membership in EU in 2003. The main reason for this was the introduction of various European standards and requirements towards the production, trade and other spheres of employment, held on the eve of the referendum. Together with economic reasons, Old Believers also had nostalgic mood towards Soviet time that was based on their national and language roots.

All in all, basing on the information I have, it seems to me that nowadays, with the exception of religion and language, there are no considerable differences in Old Believers’ everyday life in comparison with other rural inhabitants. Moreover, during the Soviet time even religious traditions of Old Believers have become much more secular.

Old Believers' Traditions

Looking at the original roots next traditions and rituals can be listed aiming to introduce what constituted Old Believers life before the Soviet time. Old Believers married people of the same religious group. They named children after the saints in the church calendar, baptized newborns in lake water in forty days after the birth, kept Lent, avoided alcohol and confessed. In contrast with Orthodox followers they accepted only those saints who lived before the Nikon's reform. Every family had a cross and icons inside home. Sunday was a day for attending the church. The rule that still has strong position among Old Believers' society is ban for smoking (Plaat 2010: 81). Interestingly, that so negative attitude towards smoking has rooted that deeply because Old Believers believed that smoking is a habit that was brought to Russia by Antichrist – Peter the First (Пономарева 1999: 24).

During the Soviet time most of the traditions were lost. Nevertheless, independent Estonia facilitated the restoration of ancient traditions financially. Thus, a list of projects that aimed restoration of books, icons and churches has been launched. However, some of worship houses are impossible to reopen due to significant thefts. Old Believers institution was the only organization among Russian organizations of Estonia that was invited to be a member of EBLUL⁴. In general, membership of Estonia in EU has brought many positive outcomes for the cultural heritage of Old Believers.

Old Believers themselves are concerned regarding restitution of ancient traditions, celebrations and rituals. Thus, patronal feasts have been practicing again. After sixty year pause the feast of Assumption of the Blessed Virgin Mary took place in Kallaste that gathered Old Believers from all Estonian regions. People from all eleven congregations sang together in a chore and shared the food from the common table. It was the first time when Old Believers could feel themselves as a unite community after the decades of decadence. The practice to celebrate feasts together has become popular. Some events are even celebrated on the remote Piirissaar islands where people from the whole Peipus Lake shore come to by boats.

⁴ European Bureau for Lesser-Used Languages. <http://eblul.eurolang.net/>

Interestingly, that pupils in Kolkja study Church Slavonic language till the fourth grade. There are also Bible Study classes in the schools (Credo.Ru). Additionally, Old Believers still use own archaic musical notation and signs (hook) singing that is used for monophonic choral performance.

Thus, while most of ancient traditions and beliefs were lost some of them are renovated and still kept. It is also seen that some traditions in rural areas survived more than in towns. Since culture tied to the location and surroundings I assume that traditions in rural areas have been preserved more by the reason of higher degree of isolation and it is one more point for choosing rural areas as research interest.

All in all, Old Believers is indeed a distinct community in the terms of religion and language. This fact makes Old Believers an interesting case for the study related to practices and social innovation that will be considered below.

1.2. Social Innovation and Waste Recycling

“Every truth passes through three stages.

First, it is ridiculed. Second, it is violently opposed.

Third, it is accepted as being self-evident”.

Schopenhauer

Humanity as a society has been changing since the beginning of its existence. These changes can be found and studied in every part of life. Expansions, scientific and technical progress, religions, wars, unions, education, ecology, technologies, music, fashion, internet – all these spheres change and are changed. And all these uncounted changes form and define human life at the particular point of time.

1.2.1 Introduction to Social Innovation

Ideas, strategies, trends and concepts born, live and die. But how do all these processes proceed? How do new ideas appear? Who should provoke and enhance them? What do influence the way we behave in new situations? The mission of social sciences is to study all these processes in order to find among them working regularities that could allow to solve problems and to prevent new difficulties. Social innovation theory among others aims to achieve this goal.

Definition and ways of creation

Social innovations are new ideas (products, services and models) that simultaneously meet social needs and create new social relationships or collaborations (Murray et al. 2010: 3). Social innovation suggests creative and practical solutions for the problems that cannot be solved by the existing policy and institutions. Social innovation as a principle can either replace the old structure by the totally new one or modify the old structure by turning the fulcrum or suggesting a new angle of view. New links between old components also constitute a new idea (Mulgan 2007: 22). So, new ideas do not necessarily assume appearance of totally new elements.

It follows from the definition that new ideas have to fulfil two criteria. Firstly, to meet *social needs*, and secondly, to create new *social relationships*. *Social* relates to characteristic of the experience, behaviour, and interaction of persons forming groups (The Free Dictionary). *Need* itself is what, if not met, can cause serious harm or socially recognizable suffering (Doyal & Gough, 1991). Hereby, social innovation follows a goal to achieve only positive changes since negative ones lead to harm and contradict to the idea of need. Consequently, *social need* points on a particular problem of a certain group of people. The second criteria, *relationship*, is defined as the mutual dealings, connections, or feelings that exist between two parties, countries, people, etc (The Free Dictionary). Thus, by social relationship I assume interaction between two parties that are represented by certain groups of people.

In this MA thesis social need might be represented by the demand of people to utilize waste or some particular types of waste with the help of government. In the bigger scale resource recycling and recovery represent social need for ecological sustainability that is satisfied by waste sorting. The argumentations in favour of resource recycling and recovery necessity will be provided below. Also it is seen that a number of actors (individuals, industry, specialized sorting centres, waste utilization companies, ministry of environment, etc.) participate in the process and we can mark creation of new social relationships. Thus, we can talk of new waste recollection system as of social innovation.

Developing the topic I want to specify how/if the success of the new idea is important. For instance, new idea was designed in order to solve a certain problem. It was implemented, but in the end it did not solve the problem. Can we call this idea social innovation? In this case it is reasonable to consider the root of the question. What is really valuable: an attempt to meet social need or effects that in reality leads to improvements and solution? Obviously, just attempt does not meet the need itself, only positive outcomes represent the solution. Thus, I assume that social innovation has to be necessarily beneficial. Introduction the change itself is not satisfactory condition, the change also has to bring improvements. The result cannot guarantee total success, however, theoretical benefits are assumed and success at least to some extent is a necessary part of social innovation. This is how social innovation differs from creativity or inventiveness (Mulgan 2007: 8). Examples of such positive changes can be efficient change in manner, stances or social impacts. Therefore, the question if the introduction of new waste recollection system has been successful is one of the insights in this MA thesis.

Historically governments were the decisive force for innovative solutions (Mulgan 2007: 9). Today two ways for social innovation creation are common:

- 1) Bottom-Up. In this case people meet the needs, inform or impact certain institutions regarding their needs and the institutions or government solve people's problem.

- 2) Top-Down. Here government (possibly after the notification of scientists or NGOs) prevents the problem that satisfies social needs.

The discussion about which approach is more efficient slightly makes sense in the terms of finding the universal solution. Every case demands individual consideration and actions. However, some academicians incline to certain sides. For instance, Mulgan (2007: 22) argues that bottom-up approach arises at much lower cost than top-down solutions. Although, social innovation facilitated by top-down way meets the obstacles that usually is connected to hostile attitude of end-users. That can be caused by practical factors (e.g. rising costs) or mental factors (e.g. old paradigms that deeply settled down in the mind of society). Other things that may become a barrier on the way of implementation are lack of intension, time or knowledge. Nevertheless, in practice most of the social innovation neither purely top-down nor bottom-up (Murray et al. 2010: 4-8).

Social innovation stages

Social innovation represents a process. Murray, Caulier-Grice and Mulgan introduce six essential stages of this process (2010: 12). These stages are not constant for all the cases. Sometimes they can intersect and in some occasions one or several stages can be skipped depending on the conditions.

- 1) *Prompts, inspirations and diagnoses*. This stage includes pre-conditions that have invoked the need for change. It can be crisis, appearance of new problems, aggravation of old ones, constant failures of old structures, etc. At this stage the problematic issues should be clearly defined together with the reasons that had caused them.
- 2) *Proposals and ideas*. Here discussions regarding solving the problematic issue take place. At this stage innovators generate ideas and choose the best ones. As a result the efficient decision has to be found.

- 3) *Prototyping and pilots.* At this stage new idea is tested. The way of test depends on the situation, but ideally it has to be implemented in practice involving all actors. However, as an option it also can be prototype or trial version of the final idea. Here researchers have to find the errors and overcome the obstacles that hinder to success.
- 4) *Sustaining.* Here the ideas become an everyday practice. For this matter all conditions have been already created at the previous stage. For sustain function necessary legislation exists, source of funds constantly donates money, team of support work, citizens have knowledge about the practices, etc.
- 5) *Scaling and diffusion.* This stage forms the conditions for the project development and growth. Even though „scaling” is not the action that the innovation may always need, but this term is rather used in the context of „possibilities for the improvement“. How active policymakers are, how mobilized activists are, how concerned citizens are – all these issues are considered in the current stage.
- 6) *Systemic change.* This stage assumes the systematic goal of social innovation. Healthy interaction between the main elements is the crucial condition for the systematic change. One more goal considered at this stage is to come up against the hostility and difficulties of old order.

All in all, social innovation can be considered as social innovation if it fulfils certain requirements. Particularly it has to bring positive outcomes at least to some extent and at least two groups of people have to be involved in the process. Social innovation consists of six stages, however, some of them can merge. The correct recognition of social innovation is of high importance in order to apply correct patterns for the process.

1.2.2 Waste management definitions and importance

In this MA thesis the new waste recollection system in Estonia is considered as a social innovation. For this matter waste utilization will be considered in detail. Firstly, I will provide definitions of the specific terms and notions related to the waste utilization in

order to avoid inaccuracies. Secondly, importance of waste recollection system existence will be considered in order to emphasize the value of the research.

Conceptualization and operationalization of the terms

While I will make the attempt to define the waste, I should admit that in the cultural-specific level it is impossible task since by “waste” can be considered different things even within one family. Keskaik (2000: 22) explains that waste is cultural “given” universal that is considered external in the culture; and externally to the culture as culturally internal. Thus, definitions in this paper aim to scope the reality as much as possible, however, might not represent the complete reality.

Waste is “any substance or object which the holder discards or intends or is required to discard” (Directive 2008/98/EC, Article 3). In the current paper by “waste” I assume *municipal waste* collected in the domestic households and sometimes I refer to the waste collected from places closely related to Old Believers everyday life (for instance, cemeteries, lake). The meaning of term “waste” is extended in the official statistics in the subsection 1.2.3 where by “waste” and “municipal waste” is also considered waste from cities’ enterprises (supermarkets, restaurants, etc.).

Waste sorting or *selective sorting* is a sorting method used to separate waste on the basis of its composition. It is carried out by individuals and industry and then more precisely in specialized sorting centres (The Free Dictionary). In Estonia, *selective waste* covers glass, metal, plastic, batteries, used electric and electronic equipment and expired drugs. Here “waste sorting” is also implied by the terms *new waste recollection system*. Here I define *recycle* or *recycling* as a set of processes (including biological) for converting recovered materials into useful materials and/or products (Waste definitions). The waste can be recycled into the same material as it was before, and then it is called “closed loop recycling”. Also it can be recycled into new but relative type of material and then it is “open loop of recycling”. In my MA thesis I consider both loops as beneficial processes and will not distinguish them. Sometimes by *recovery* recycling is implied, but here I

use this term only in the meaning of recovering energy and other not relative types of resources from the waste. By the *disposal* I assume deposit of waste to land or water. *Landfills* are the places of disposal.

All municipal waste is divided on hazardous and non-hazardous. *Hazardous waste* includes any unwanted or discarded material (excluding radioactive material), which because of its physical, chemical or infectious characteristics can cause significant hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed (Waste definitions). Otherwise waste belongs to *non-hazardous* waste.

Biodegradable waste is the waste capable of being decomposed by the action of biological processes (Waste definitions). Usually it contains organic products, for example, food. *Packaging waste* includes the waste obtained from packages and assumes glass, metal, plastic and tetrapak. *Composting* is the controlled process (at professional or amateur level) whereby compostable organic wastes are pasteurised and microbiologically transformed under aerobic and thermophilic conditions for a period not less than six weeks, including the pasteurisation phase (Waste definitions). Usually this process implies producing of fertilizers from the waste.

The priorities⁵ regarding waste treatment that were set up in the Directive 2008/98/EC (Article 4) are the next:

- 1) prevention;
- 2) preparing for re-use;
- 3) recycling;
- 4) other recovery, e.g. energy recovery;
- 5) disposal.

It is interesting to discover how this waste hierarchy is reflected in the waste practices of Old Believers and after the analysis I plan to make some comments.

⁵ Also known as waste hierarchy

Importance of waste sorting

Today waste sorting is of high importance in the global agenda. Concerns regarding this problem were raised from recent global changes in society, market and values. Financial growth facilitates rise of consumption. Consumption implies waste accumulation and, consequently, demands waste utilization. Nevertheless, with the development of market economy and competitive business environment, financial profit has become of much bigger significance than environmental concerns for the most of enterprises.

While on the face of it the tendency represents positive way of development in the economic terms, there are a number of pitfalls that may lead to self-destruction of society. And one of them is neglecting the environmental problems. Waste sorting is a measure that aims to prevent a list of harmful consequences both for nature and humanity (Recycling Guide). To the respect of nature, first of all, the less people landfill the waste, the less harmful chemical and greenhouse gases are realised. Secondly, recycling of paper prevents spread of deforestation problem and all negative consequences that deforestation facilitates. And thirdly, but not the last one, sorting of waste is an important component for saving energy.

To the regard of how every of us benefits from waste sorting next argumentations can be provided:

- Capacity of landfills is limited. Fulfilling of them requires making new ones. Landfills that opened far away from the cities increase the cost of waste disposal and may lead to the increase of taxes while dumps located close to cities make negative influence for air and ground water. Thus, both options are not suitable for people.
- Mining of natural resources is more costly activity than production goods from recycled waste. This condition makes high influence to the price formation. Thereby, by the waste recycling people benefit financially.
- Sustainability is one of the Millennium Development Goals. The course of sustainable development implies preservation of natural resources for future

generation. That is how recycling helps to implement long term goals of the UN that are called to choose the best way of development for the humanity.

All these reasons force society to find more efficient solutions for waste utilization where waste sorting is an essential part of the solution. Moreover, waste is no longer only the threat to the environment and humanity. It has become a resource, and this new value has to be used intensively.

1.2.3 Waste utilization system in Estonia

In this subchapter I will provide the overview of waste treatment systems in Estonia. During the recent decades Estonia has experienced different governments and political regimes that promoted different policy in the terms of waste utilization. Therefore, the questions of what has been done, why, when and by who will be considered below.

Ecological consequences from the Soviet time

Soviet environmental heritage for Estonia was very noxious. The freshly renovated state had got significant residue pollution from mining and oil activities, groundwater pollution caused by military activities, soil pollution and hazardous landfilled waste. With the strong concentration on industrialization and military force build-up, the Soviet Union neglected the problems of environment and conceptualized them as the issues of capitalist society (Kiisel 2013: 7). Since the capitalist society was perceived as an incorrect way of development, the environmental problems automatically moved to the category of the issues that were not worth to be considered and contributed to.

Estonia had been needed state involvement towards ecological situation for decades; nevertheless, environmental problems had been noticed only after the collapse of the USSR. When the „iron curtain” fell, information from West started to spread. People got the opportunity to travel, observe, note and adopt the western achievements in the

environmental field. As a consequence such issues as bottles and paper collecting acquire new value – they were not seen just as economic benefit any more, they have got also an ecological value. Interesting observation has been done by professor Gooch. He found that in 1992 Estonians evaluated the seriousness of local environmental problems higher than Swedes (Kiisel 2013: 10) that points on rise of environmental awareness in Estonia at that time. As it was discovered earlier, usually social innovation has neither purely top-down nor bottom-up nature. And this statistics exemplifies the contribution of the society into creation of new waste sorting system.

Government of independent Estonia also contributed to the problem's solution. In contrast with Soviet authorities that supported centralized management and limited flexibility of the local governments, new power distributed responsibilities regarding environment to the municipalities framing them by legislation. New environmental plans were designed, technologies were financed and with the appearance of independent media public discussion went to the new level. All these measures were absent and often were impossible in the conditions of the USSR.

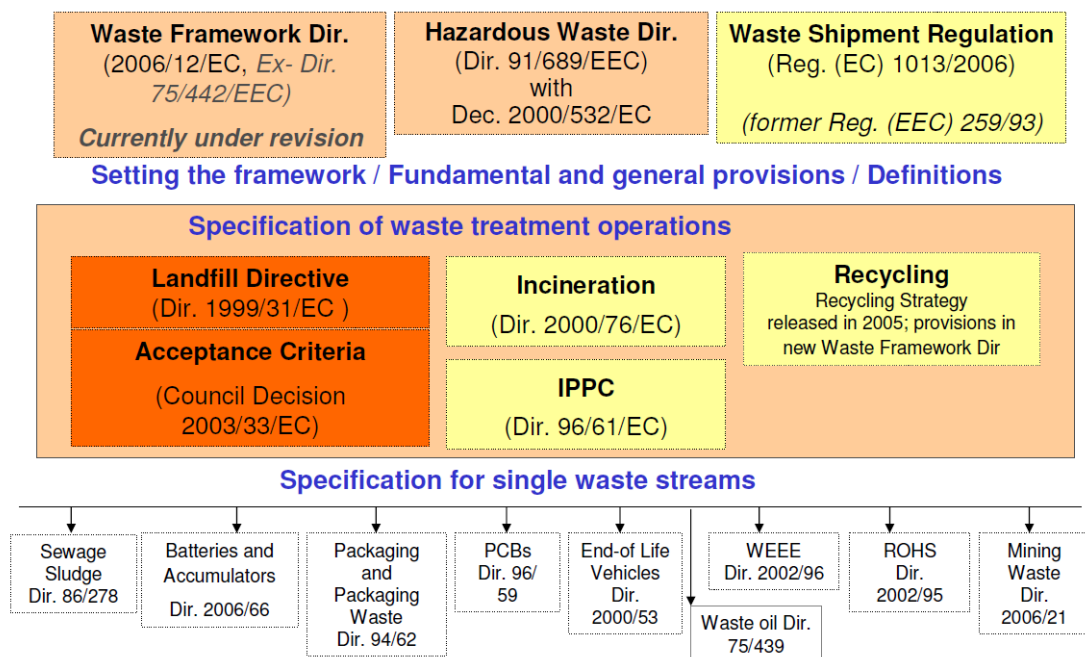
All in all, change in the regime led to the re-consideration of values and ways of management where environmental problems were finally noticed. Old ways of solution such as landfilling and simply neglecting the problem that were flourishing during the Soviet time could not satisfy the social need today. New pro-environmental approach and attitude had appeared.

Legislative base and statistics

First serious attempts of the Estonian government to build a new waste management system took place in the mid 1990s when Estonia took a course towards EU-membership. In 1995 Estonia enacted the Law of Sustainable Development. Two years later the state designed own environmental strategy. In 1998 the first attempt to introduce the first law on the waste had been done that, however, existed mainly on

papers (Kiisel 2013: 11). Lack of infrastructure and practices of the citizens inhibited the development of waste treatment in Estonian reality.

Nevertheless, next decade had become for Estonia more successful in environmental changes. These improvements were connected mostly with the strict EU directives and obligations that Estonia had to fulfil in order to join the EU (Graph 1). Thus, it can be seen that sometimes organizing even a simple practice, e.g. throwing waste away, requires fundamental legislative preparation.



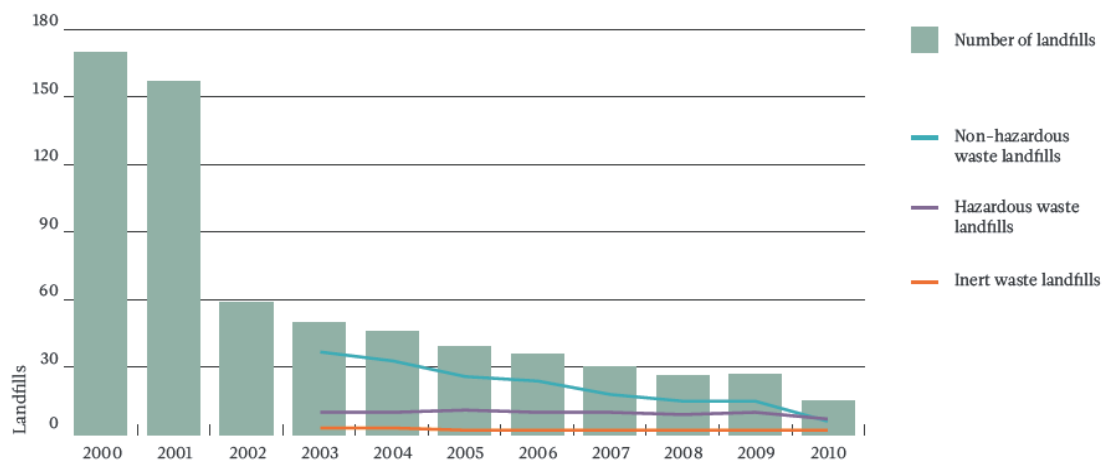
Graph 1. Legislative changes in Waste Management during 1996-2006 in Estonia.

(Source: BiPro, 2007)

New waste-based legislation implemented in 2004-2007 promoted recycling and reuse of waste together with establishment of new waste management centres. Additional responsibility was placed on the producers who got the obligation to deal with waste flows according to the new requirements (Estonian Environmental Review 2009: 146).

The old landfills that did not meet new standards gradually had been closed by 16 July 2009. All in all, from the 170 dumps in 2000 only fifteen have been left by 2012 (Graph 2). The closest landfill to the Old Believers villages today is located in five km from

Tartu. Obviously, Old Believers cannot dispose the waste to landfills themselves and they met a social need where waste utilization companies were created to satisfy it.



Graph 2. Number of landfills in use in 2000–2010
(Source: Estonian Environmental Indicators 2012)

In May 2005 the national system of collection and recycling of packaging waste has been run into force. According to the Packaging Act consumers can return glass and plastic bottles and tin cans for beer, low-ethanol alcoholic drinks and soft drinks. The non-profit organizations Eesti Taaskasutusorganisatsioon and Eesti Pakendiringlus, and the company OU Eesti Pandipakend have become the first groups accredited for packaging material recycling by the Ministry of the Environment. Collection of the dangerous waste had been also organized. Since 2003 people can deposit light bulbs, batteries, medicines, oil, chemicals and other dangerous household waste at the special centres. In 2006 the number of these centres exceeded one hundred (Ministry of Environment).

In the terms of *legislation* Estonia has completed the transposition of the majority of EU legislation regarding waste management with the exception of the Directive 2008/98/EC on waste that has not been transposed into national law. Estonia failed in Waste Prevention Program and Targets for recycling and recovery of waste materials and construction and demolition waste. Although other criteria were completed successfully.

Estonia's total score of success is 80 of 100 while average EU-11 score is 83 (Ernst&Young, 2011) that allows to consider Estonian experience as acceptable.

There are some inaccuracies in municipal waste collection system data. Perhaps, there is different data regarding the *amount of collected and generated waste* in Estonia. It can be caused by the fact that the system of municipal waste collection covered only 88% of residents (2010) and, consequently, 12% of Estonians had to dispose waste illegally. According to the statistics, in 2009 7% of generated waste was dumped to the environment against the EU requirements.

Organization of the municipal management system requires improvement. For today local municipalities are responsible bodies for waste collection, transport, recovery and disposal. Nevertheless, citizens pay directly to the waste collection operators. Although, municipalities receive a landfill tax – 75% of the fee for landfill disposal. Thus, this tax is a stable income source for the municipalities and they are not interested in its reduction, and, consequently, reduction of waste disposed in landfills is also out of their interests. Debates on this topic are holding on.

All in all, since the idea of new waste recollection system is new, meets the social need, creates new social relationships and beneficial in the state scale, in this MA thesis waste sorting system in Estonia is considered as a social innovation.

1.3 Situation with Waste Practices in Estonia

In the previous subchapter new waste recollection system as a social innovation was considered on the level of state. However another side of this process – end-users practices – is also of high importance. This subchapter aims to investigate how new recollection system was accepted by different groups of Estonian citizens. This analysis will also represent the distribution of waste sorting in Estonia that was mentioned in the Introduction part.

Background information

Estonia counts 1 mln 300 thousand citizens who live in fifteen countries (Maakonnad) – administrative subdivisions. Estonian population is not homogeneous. Perhaps, Russian national minority constitutes about a quarter of the population while other minorities represent about 5% of the citizens. Territorial distribution of the minorities is not flat that leads to bilingual environment in some parts of Estonia. Density of the population varies significantly (Statistics Estonia, 2011) and average age differs considerably in the administrative countries (Statistikablogi, 2013).

Thus, conditions for social innovation implementation are not equal by default. Presumably, different national, cultural, generation and other social groups may meet innovation differently. Obstacles that lay behind this problem may not be obvious at the first view. For this matter reliable data and accurate research are needed. In order to understand to which extent of success social innovation of new waste recollection system has been introduced on the end-users scale, the volumetric data of national Estonian questionnaire is taken as a data base.

The Institute of Journalism and Communication of the University of Tartu has been provided the survey „Me. The World. The Media.“ among the citizens of Estonia in 2002, 2005, 2008 and 2011. The institute pursues only scientific goals and does not attempt to satisfy any personal or political intensions. The questionnaires consist of up to 900 questions that are related to a wide range of human life issues. Big number of the questions was dedicated to the media that was caused by the academic interest of the Institute of Journalism and Communication, however, questions regarding waste treatments have been also well enlightened. 1477, 1507 and 1510 of responders took participation in the questionnaires in 2005, 2008 and 2011 respectively. All in all, the survey „Me. The World. The Media.“ is a reliable source for further examination.

New waste recollection system has been introduced in 2005. In order to encourage people to apply new waste recollection system a list of measures has been introduced. To educate people regarding the environmental reasons of new social innovation and to

teach them how to use new facilities, informational booklets were spread. The same goal was followed by educational TV- and radio-programs, articles in the newspapers and magazines. Financial motivation to recollect waste also had appeared: similarly to the Soviet time people again got the opportunity to get deposit for the bottles.

Nevertheless, innovation had been met with different degree of acceptance by different social and territorial groups. In order to define the tendencies waste treatment performance has been analysed upon such dimensions as territory, time, types of waste, gender, language and others while here discussed only representative ones.

Territorial division

Table 1 represents how people applied the system of waste sorting in 2008 in five parts of Estonia – North, West, Central, South and Northern East. The responders answered the question “Do people in your family sort the waste and which exactly?”. People were provided with the possible options for answers that are named in first column in the Table 2.

Table 2. Waste sorting in Estonia, %, 2008

Type of waste	Region				
	North	West	Central	South	Northern -East
Deposit-paid containers (bottles, etc.)	75.0	81.8	81.5	81.9	58.7
Hazardous waste	48.6	69.5	72.4	59.3	30.1
Paper and cardboard	65.0	70.5	68.6	61.9	47.4
Mixed packages (glass, plastic, etc.)	32.0	48.6	54.8	43.5	23.5
Biodegradable waste	50.0	54.2	57.3	45.3	23.6
Not sorting at all	15.6	9.7	4.5	12.3	28.1

It is seen that citizens of Central part of Estonia marked their waste practices the most often in all types of the waste with the exception of paper and cardboard where West

overcame their number. Further places in success in waste sorting are distributed between Western, Southern and Northern Estonia respectively. The least percentage is noticed in Northern-Eastern Estonia where, remarkable, the rural Old Believers live. In comparison with Central Estonia people from Northern-East defined themselves twice as less as those who sort hazardous, biodegradable and mixed packages waste while the number of people who pointed that they do not sort waste at all was six times more than in Central Estonia. Remarkable, that difference in results is significant even in comparison with Southern and Northern Estonia – the closest neighbours of Northern-East in the rate of waste sorting. What could invoke so big gap? Could it be lack of waste treatment facilities? If to assume that it is the reason, then it is logically that people are not able to sort the waste. I requested data about number of existed facilities in the regions from the Ministry of Environment, however, the answer has not been sent and this issue still is not clear.

All in all, this pattern clearly points that Northern-Eastern Estonia is a problematic area and an interesting case for study.

Urban-rural division

Table 3 shows the distribution of waste sorting in rural and urban areas in 2005, 2008 and 2011. Responders were asked the same question regarding what waste they sort if they do. Data of 2005 is not full and represents only percentage of people who marked that they sort waste at least to some extent and those who marked that they do not sort waste at all. For 2008 and 2011 years data regarding treatment of particular types of waste is fully available.

It is clearly seen that people in countryside pointed more often that they sort waste than people from towns. This tendency is stable for all years and types of activities, however, the gap itself is not stable and has been fluctuating between 5% and 10% for the habit of waste sorting in general and up to 22% for certain types of waste treatment. This fact poses a question: *why do people from rural areas estimated themselves more as those*

who sort waste than it was done by urban people? At the first view this tendency is not expected since we assume that towns are supplied with better infrastructure of waste treatment facilities and more environmental information.

Table 3. Waste sorting in Estonia, %

	2005		2008		2011	
	Urban	Rural	Urban	Rural	Urban	Rural
People who sort waste	76.5	82.3	72.7	82.5	80.9	86.0
Hazardous waste			46.0	68.7	54.3	69.1
Paper and cardboard			62.3	64.0	69.4	70.9
Mixed packages (plastic, glass, etc.)			31.9	49.8	45.9	62.0
Biodegradable waste			40.8	57.7	41.9	57.2
Not sorting at all	23.5	17.7	17.1	9.8	10.2	6.4

Developing the topic of information, it seems logically that having in use universities, libraries, lectures, press (especially foreign magazines and newspapers), exhibitions and other sources of information people in towns have better access to the information that might raise their environmental awareness. Nevertheless, the figures do not show this connection. Thus, while impact of information should not be neglected at all, the gap between urban and rural areas points that information does not have essential influence. Therefore, the reason why the statistics show such kind of result must lie in the different dimension.

The assumption that also can be done is that people from countryside have own ways of waste sorting. For instance, biodegradable waste can be used as compost for the fields and paper as heating for stove. Thus, rural citizens might be more interested in the waste sorting since they clearly see benefits of this process on the spots in contrast with urban citizens for who this benefit is mainly theoretical.

All in all, in the case of finding some explanations, confirmation or refutation of the assumptions, relevant information will be mention in the conclusions.

Language division

Specific tendency was noticed in the dimension of language. On the whole, people who define Russian as the first language pointed less that they sort waste than those who define Estonian as the native language.

Table 4 represents answers on the question “Do you sort the waste?” by certain types of waste divided by the first language of responders in 2008. It is clearly seen that number of Russian speaking population who answered this question positively is less than Estonian speaking people up to forty percent. It leads to the assumption that Estonians might sort waste more than Russians. What has invoked this phenomenon?

Table 4. Waste sorting data by language, 2008.

	Language	
	Estonian	Russian
Deposit-paid containers (bottles, tins, etc.)	80.7	66.1
Hazardous waste	66.3	26.3
Paper and cardboard	68.4	50.6
Mixed packages (glass, plastic, etc.)	48.0	16.3
Biodegradable waste	55.7	26.7
Not sorting at all	9.5	25.8

First assumption that can be done is a lack of educational information in Russian language. Do all new facilities have messages in Russian? Does Russian language press enlighten the problems of environment and waste treatment? These questions need examination. However, from another hand, usually containers for separated waste include pictures that make intuitively understandable the types of waste that are allowed to throw in the container. Also many Russian speakers understand Estonian at least at the intermediate level that does not make language a problem at the basic level. And finally, data shows that still many of Russian speaking people sort the waste. Consequently, sharing information from one person to another in Russian is an available way for those who would like to obtain this information. Thus, lack of information

might be a problem for some extent but most probably it is not a crucial reason for such big gap.

Another assumption refers to mentality and cultural differences. We can assume that awareness of Russian speaking people regarding environment is lower than the same issue for Estonian speakers. However, according to the Estonian Development Report 2007 that investigated values among Russians and Estonians living in Estonia this assumption can be invalidated. The report points that Ethnic Estonian and Estonian Russians assess “Clean Environment” approximately the same as well as “Comfortable life”, “World of beauty”, “Technical development” and “Pleasant life” that can be referred to the issue of waste treatment as well. Thus, it seems that the explanation by values does not make sense.

All in all, a big gap in waste sorting practices exists between Estonian and Russian speakers, however, obvious reason for that was not found. This question requires further examination and I hope that my research will bring some light to that.

All in all, waste treatment involves more and more people after the introduction of new waste recollection system. Nevertheless, social innovation was implemented to different extent of success and three crucial features were described above. Many assumptions regarding the reasons of that were done in the current subchapter. While the final goal of this MA thesis is investigation of Old Believers’ waste utilization practices, I will also try to find the answers for these tendencies related to the Old Believers region. I assert that answers on these questions will contribute to integrity and usefulness of my research.

1.4 Practice Theory and Waste Behaviour

Dealing with people, things, nature and processes in everyday life individuals have to choose a way of how to act. Actions lead to certain results and consequences that all together constitute life. Saying by other words, every single decision of how to act impacts future. That is why forces that impact decisions and actions are of a great importance for studying. Thus, having understood what forces/Female in 50s, Tools/conditions lead to environmental-friendly practices scientists and politicians can facilitate promotion and/or implementation of certain measures that would lead to the improvement of situation. In the case of waste sorting it is important to find out what are peoples' practices are today, what obstacles do they face and whose influence change the practices. Having these questions answered, a big step towards environmental sustainability could be done.

1.4.1 Practice theory approach

This subsections aims to introduce practice and Practice theory. Practice theory appeared about twenty years ago as a demand of sociologists on new, more certain explanation of people behaviours since it was revealed that Behaviour theory cannot be applied for many cases. Thus, while nowadays Practice theory is a separate approach from Behaviour theory, I use comparison of these two theories in order to show this paradigmatic shift and to point on strong sides of Practice theory.

Comparison of practice and behaviour approaches

In order to understand the nature of practice creation, it is reasonable to look at the motivation that an individual aims by performing the action. Perhaps, one more

question is popping up: does the motivation always exist? Do people perform in everyday life routinely or rationally? In order to answer these questions it makes sense to examine the nature of rational choice.

Being motivated by *rational choice* people meet the challenge, analyse what way of dealing with the issue is the most appropriate or beneficial and depending on the decision act in a certain way. *Behaviour theory* is based on this ideology where behaviours are considered as derived from *individual* and *rational* point of view actions. In other words, individual performs certain behaviour when it is the most appropriate option.

To analyse how this approach fits to reality, it is appropriate to consider an example from everyday life. For instance, a woman comes to the supermarket for buying milk. Usually she buys 2,5 % fat milk of “ABC” factory. How will she act in the situation when this milk is absent on the shelf? There are a few options. She can buy milk of the same trademark, but with different rate of fat. She can buy 2,5 % fat milk but produced at different factory. She can go to another shop and buy the milk she used to drink. And she can skip buying the milk this day at all.

What choice is rational in this case? Is it rational to buy unknown carton of milk? Is it rational to spend extra time for visiting another shop? Is it rational to change the menu for dinner? If to define *rational* as consistent with or based on reason; logical (The Free Dictionary) then woman has to conduct analysis, compare all possible options and find the most appropriate solution that would be the most reasonable and logical. For this purpose she has to have data regarding how good milk of other trademarks are; whether the milk she needs is available in the other shop and if yes, how much time it would take to buy it (maybe there are queues in the shop?). Also if she changes the menu for evening then is she sure about availability of other products for making new dishes? Basically, standing in front of the fridge with milk in a supermarket this analysis cannot last longer than ten seconds. Evaluating all these conditions for such short time is of great complexity. Most probably the woman will act by *impulse*. She can choose every of listed earlier options thinking that this is the most beneficial way, however, in reality

these conclusions are very interim and there is no confident proof to confirm the rationality.

“Despite the common assumptions of economics in many circumstances, people, it turns out, often aren’t actually all that “rational” in their behaviours and decisions. They don’t conduct some sort of complicated cost-benefit analysis when faced with a choice. In fact, they are just as likely to do what they have always done, what impulse tells them to do or what their neighbours or friends generally do”. (Shove 2012: 100)

Practice theory is based on the approach that people act *routinely* in their everyday practices. There are two main distinctions between practice and behaviour theories. Firstly, Practice theory shifts behaviours from *individual* to *collective* consideration. Practices should be considered in the context of neighbouring practices, changes, phenomenon and actors since they interact and impact each other (Gram-Hansen 2011: 74). For instance, new knowledge or development of technologies might affect the transformation of practice. Secondly, according to Practice theory humans behave routinely and do not analyse their actions rationally – usually actions are mundane and routine. Indeed, little do we think of how to cross the street, take a shower, listen to radio, check facebook page or drive a car when we have done these actions already for many times.

Nevertheless, it does not mean that people never act rationally. They do that when action meets favourable conditions for the rational choice and usually it happens at the first stages of practice formation. Turning to the favourable conditions, first of all, it must be the desire of a human to act rationally. Even having known that rational choice might be different, very often people act in a way that is more convenient or more usual/easy for them. Secondly, appropriate external conditions. It can be availability of data, time, etc.

For instance, when people meet batteries as a waste first time in their life, they might think nothing special regarding this matter and just consider them as usual waste. And

waste goes to the trash bucket – this is an example of routine behaviour when people act in the easiest way. However, when conditions are favourable for rational choice – for instance, people met lots of batteries, heard information that it should be utilized in a special way, etc. – then they might act rationally in order to change their behaviour. Therefore they allocate separate bag for the batteries and it might take some time to accustom putting batteries to that bag. When these actions have been done for several times, people do not think rationally any more – they just put batteries to the bag routinely and this action becomes a practice.

Practice and Practice theory definitions

The routine accomplishment of what people take to be “normal” ways of life considered as a *practice* (Shove 2004: 117). Individuals represent practices carriers (Shove 2012: 83) at that moment of time when they deal with routine processes. In the definition of practice „normal” means the usual, customary for the particular carrier and does not necessarily point on common action in universal scale. For instance, putting white powder made of special plants that protects skin from the sun is a normal way of behaving for Vietnamese women. At the same time this practice might look quite inappropriate measure for women from European regions even if they would visit Vietnam. Women from European countries would rather replace the powder by sun protection cream or by the reduction of spent time under the sun. Even if they are encouraged enough to put the powder on their face they might meet a question of how much should they take the powder, what zones should they avoid and overall this action will not be felt as normal way of behaving.

Practice theory refers to philosophy of Heidegger and Wittgenstein and social scientific ideas of early Bourdieu, early Giddens, late Foucault and Butler (Halkier et al 2011). In 1990s the idea of practice was shaped by such researchers as Schatzki, Mitchell, and others. Later it was developed by European scientists where works of Shove, Warde, Reckwitz are of the particular interest. “Practice theory is, however, not a commonly agreed upon theory, but more like an approach, or a turn within contemporary social

theory“ (Gram-Hanssen 2011: 61). It caused by differences in researchers’ definitions of what elements constitute the practice.

Generally, *Practice theory* can be defined as „a set of cultural and philosophical accounts that focus on the conditions surrounding the practical carrying out of social life“ (Halkier et al 2011: 3). Practice can exist in two forms: practice-as-performance and practice-as-entity (Shove 2012: 106). *Practice-as-entity* considers the practice existence in general while *practice-as-performance* assumes particular implementation of the practice. For instance, utilization of waste is a practice that exists in the modern world as entity. However, the moment when a person takes trash bucket and brings it to the waste container the practice becomes the practice-as-performance. Even though we can distinguish practice-as-performance and practice-as-entity, they represent the organic whole. Practice-as-performance is impossible without the model embedded in practice-as-entity. At the same time practice-as-entity would disappear in a time without constant repeating practice-as-performance. In a global scale practice-as-entity is of the real interest since it allows to define trends, design plans, keep statistics, etc. However, in order to have knowledge about practice-as-entity academicians observe and study practice-as-performance.

1.4.2 Practice theory potential

These days information regarding importance of environmental sustainability is wide spread in Europe. More and more people adopt eco-ideas where waste sorting is integral part. How high chances for changing practices towards sustainability among people who are motivated by intension to keep environmentally-friendly way of life?

Useful outcomes of earlier practice studies

John Thogersen from the Aarhus University studied the practice of using public transport in Copenhagen. The idea was to reduce usage of cars in favour of public

transport. For this goal volunteering drivers have gotten free month ticket for using public transport. During the month they used public transport that possibly could form new practice. Researchers assumed that many drivers had some prejudices regarding public transport while closer acquaintance with it could eliminate excess worries. Interestingly, that free travel card did not impact practice changes significantly. Only a small group of people have changed their driving habit and, remarkable, most of them belonged to the people who recently had changed either residence or workplace. „People’s stated intentions are good predictors of their behaviour only under conditions of weak habits while intentions are a bad predictor of behaviour when habits are strong” (Thøgersen 2012: 131). For the studying of waste treatment practices it can be assumed that environmental motivation is not a strong factor for end-users of new waste treatments system and hereby other ways of influence have to be considered.

Another interesting example and outcomes can be found in the work of Kirsten Gram-Hanssen (2011) who studied energy consumption practices. For the experiment she took a district with identical households but selected the families whose gap in consumption was the most considerable. She conducted detail interviews with ten families. The interviews revealed many interesting details. The family that has been consuming energy the most perceives fresh air and wind as a necessary element of comfort. That is why they often kept windows and door open while heating was not switched off. When they were told that by switching the heating off they could benefit financially, the family replied that they can afford payment of their bills and did not express the intense to switch the heating off in the future. Thus, own understanding of comfort causes neglecting of such issues as efficiency, costs and environmental awareness and it proves one more time that habitual approach based on rational choice is not that workable. This study can be reflected in the problem of waste sorting as finding personal benefits (excluding financial) for people and analyzing how they impact the practice.

Specific features of relations with power can be found in Hargreaves’ research (2011) who observed and analyzed ‘Environment Champions’ initiative. Sixteen volunteers formed a team of „Environment Champions” whose responsibilities included weighing waste and taking utility meter readings, developing of the ideas concerning

environmental-friendly work of office, control environmental behaviours and detection the mistakes that were done by the colleagues. Experiment showed that almost all environmental innovations were met hostile. For example, “Environment Champions” suggestion to remove under-desk trash bins for one day in favour of improved recycling facilities around. The main resistance was met from the Facilities Manager, responsible person for the waste management at the office, who declared many objectives against the experiment. As outcomes three crucial insights have been concluded by Hargreaves:

- 1) It is necessary to consider the whole bundles of practices in everyday life while taking every of them separately is not appropriate and not efficient;
- 2) Power and practices have close relations since it is within power responsibilities to ensure maintenance and reproduction of the practices;
- 3) Social order exists in practices and as well as is supported by practices.

Thus, in the case of waste treatment practices have to be considered in a context of other practices. Perhaps, old practices and views can make considerable influence. Another point at the conclusion is that power on every level (state, region, municipal) contributes own part to the practice formation and maintenance.

Elements of the practice

Practice-as-performance includes number of elements that constitute the practice. Every element reflects a certain part of the practice and defines what practice is. Saying in other words, these elements represent different constituent parts of the practice and by finding them we get the opportunity to observe how practice changes.

Nevertheless, changes in one element do not necessary mean total practice change. For instance, if to replace white football ball by green one, the practice will maintain the same. However, if to change white football ball on white basketball ball, the practice will be changed since new ball is not appropriate for the game. Thus, it is important to study of at what conditions elements of the practice is changed and how it impacts other elements and practice itself.

There are a number of concepts regarding elements of practice. Gram-Hanssen (2011: 64) provides a very sufficient analysis of practice constituent elements according to the approaches of such researchers as Schatzki, Reckwitz, Shove-Pantzar and Warde (Table 5). In this subsection I will refer to her Table adding my examples and explanations.

Table 5. Key elements in the understanding of practices.

Schatzki, 2002	Warde, 2005	Shove-Pantzar, 2005	Reckwitz, 2002a
Practical understanding	Understandings	Competences	Body Mind The agent Structure/Process Knowledge Discourse/Language
Rules	Procedures		
Teleo-affective structures	Engagement	Meanings	
General understandings	Items of consumption	Products	Things

Table 5 represents four approaches for the definition of practice's elements. We can see that number of elements varies from three to seven. Nevertheless, certain practice-as-performance is a stable phenomenon and ways of its description varies according the angle that academicians choose to study the practice.

Particular emphasizes on the important aspects that belong to practice define the elements. For example, Schatzki defines *Practical understanding* and *Rules* as separate elements. The first of them is responsible for human's understanding, skills, knowledge how to act. Very often it is also called „know how“. The second one represents rules, order, laws of action performing. Exemplifying on a housewife who sorts the waste, putting potato peels to first bin, newspapers to the second one and bottle of Coca-cola to the third one represents Practical understanding. The knowledge of what waste is biodegradable, plastic, metal, glass, etc. would be Rules. Warde follows the same patterns calling these elements *Understanding* and *Procedures* respectively.

Nevertheless, for some cases emphasizes need to be shifted. Sometimes practice does not require a certain practical understanding how to act while fulfilling the rules is a main priority. Turning to the sorting waste practice the way how a person act in order to

move a plastic bottle to certain basket is not important. He/she can through it, or accurately put; it can be done with single bottle or couple of bottles simultaneously, different additional actions (for example smashing) can be applied – it does not impact the practice of waste sorting. As long as plastic bottles moved to a right basket practical understanding does not play significant role. In other words, basically, Practical understanding is seen as a *way* of rule implementation, but not as a separate element. This approach was taken by Shove-Pantzar who united aspects of skills and rules calling the element *Competences*. For the cases when practical implementation is of a high importance and its elements should be considered in detail Reckwitz's approach is the solution.

One more aspect that is crucial for most of practice is tools. It is called *Items of Consumption, Products and Things* in the definitions of Warde, Shove-Pantzar and Reckwitz respectively, but regardless the different terminology all of them assume tools, equipment and other material elements that are essential for practice performance. In the waste treatment system it is represented by baskets at home, pit for compost, trash bins at yard, rubbish chute, waste utilization cars, etc. Nevertheless, Schatzki had skipped this element from his definition. Perhaps, his approach is good for the practices where tools are not of a high importance.

Thus, it can be concluded that dividing the practice on certain elements allows to make different emphasizes. Before conducting the research academician has to analyze what aspects are important to point out in the practice in order to achieve a desirable goal. For the case of studying practices in waste sorting I will apply Shove-Pantzar approach. It emphasizes *Competences* element that in my case will represent knowledge of the rules and actions. Also it emphasizes *Meanings* that points on motivation to act. And finally Shove-Pantzar approach includes *Products* that allows finding out how equipment impacts the practice. I assume that these three elements are essential and they will be reflected in the conclusions.

CHAPTER 2. METHODOLOGICAL ANALYSIS AND RESEARCH QUESTION

Thinking of the idea for the MA thesis I was looking for the topic that would combine ecological and social dimensions. Therefore, with the support of supervisor the search led me to the data of Questionnaires “Me. The world. The Media” that pointed out the problematic issues in waste treatment. It helped to frame the final topic of the MA thesis and to pose the research questions. One case study is the most convenient approach for the current topic and features of the approach will be pointed. For examination qualitative methods of interview and observation are involved and discussed further in the methodological part of the MA thesis.

2.1 Research Questions

The final aim of the MA thesis is to explain the dynamics of change in waste utilization practices that happened among Old Believers’ community from rural areas after the introduction of new waste recollection system. For this matter I have to find out what they do, how they do and why they do that in a certain way today and before the introduction of social innovation. Research questions aim to structure the study and to emphasize areas that require special attention. For this matter next research questions have to be answered:

1. How do Old Believers utilize the waste?

In order to understand how Old Believers utilize the waste it is necessary to investigate in detail what they define as waste, what are the sources of the waste, what they do with every particular type of waste and why. I assume that Research Question 1 will help to

line up the comprehensive picture of waste utilization practices among Old Believers community that will become the base for all other research questions as well as for conclusions. I assume also to get information regarding the problems in the households and the region in general in the terms of waste. All other information will be highly appreciated.

2. How the social innovation has been perceived by Old Believers?

When the state introduced the new waste utilization system in 2005, many measures have been applied. However, they succeeded to different extent in different regions. It is of the high importance in the current research to understand how people had reacted on new waste recollection system. How do they interpret it? Did they need it? Did they get necessary information of how to use it? Do they use new facilities? Do they find them convenient? Did new facilities affect their old practices? How did they accommodate the practices? What was the change in their practices? Do they have positive or negative attitude towards new recollection system? If the new recollection system did not bring positive outcomes in their region, can we call it social innovation? I assume that Old Believers have accepted the social innovation partly. However, they might not have appropriate understanding of facilities' usefulness together with possible low environmental awareness that might make them to neglect some advantages of new waste recollection system.

3. How religious and cultural traditions and beliefs of Old Believers are reflected in their waste practices and what is the impact of traditions today?

Usually traditions are reflected in our practices. This research question aims to investigate particular case for Old Believers behaviours. Is there something considerable in Old Believers culture that influences the waste practices? What is their attitude towards growing consumption world and how traditional views of their community are reflected there? I assume that certain Old Believers' beliefs go against to the modern culture and force Old Believers to resist or at least to make attempts at resistance. This resistance might be reflected in the waste practices.

2.2 Methodological Approach

Research questions define methods (Gillham 2000: 17). Earlier Old Believers were chosen as a distinctive group and from the methodological point of view I will consider them as a case study. In order to answer the research questions it is necessary to deepen into the way of behaviours of the Old Believers who represent the group/case for the case study. For the examination two methodological methods will be used – observation and interviews.

2.2.1 Case study

Case study is used for the researches where “how” and “why” questions have been posed (Yin 2002: 1) and can be explained in the context of contemporary conditions. This approach aims concentration on a problematic issue from a relatively narrow point of view that allows noticing all kinds of interactions and analyzing them in small details.

“In brief, the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events – such as individual life cycles, organizational and managerial processes, neighbourhood change, international relations, and the maturation of industries”. (Yin 2002: 2)

Thus, it is seen that this method completely covers the needs of my research questions where studying the changes in waste treatment behaviours of the particular group of people is the essential part.

For the next step it is needed to define clearly the selection of Old Believers for the case study. Should all Old Believers be included in the study? Today groups of Old Believers mainly dwell on Peipus Lake shores, however, they are also represented in Tallinn and

Tartu (see chapter 1.4). Since the research interest includes Old Believers only from rural areas, next settlements are appropriate for the analysis:

- 1) Raja Village;
- 2) the street villages of Kolkja, Kasepää and Varnja;
- 3) the villages on Piirissaare Island.

While cases of Tallinn and Tartu definitely cannot be included into the research areas, there is a question regarding Mustvee and Kallaste. Officially these settlements are registered as towns, however I assume that practically people mainly keep rural way of life. I think so because majority of the population lives in private houses, owns livestock while the infrastructure of these town is also underdeveloped. Nevertheless, I argue that Mustvee and Kallaste also should be excluded from the research interest that would help to avoid inaccuracies in the whole idea. That is why I take for investigation only rural areas that are officially registered as villages.



Graph 2. Settlements of Old Believers along the Lake Peipus

Thus, for the interviewing and observation all villages that are located in the Eastern Estonia on the Peipus Lake shore (Raja, Kolkja, Kasepaa, Varnja) were chosen with the exception of the villages on Piirissaare Island due to difficulties in destination.

Raja appeared in 1782 close to Mustvee and firstly was called as Mustwe Raja. Later it has become a separate settlement. In 1910 Old Believers' church was built there, but it was erased from Earth in 1944. Later only belfry and a prayer place were rebuilt. 478 people lived there in 2000. *Kolkja* was first mentioned in 1592 and later was divided on Suur- and Vaike-Kolkja. In 1977 both of them and village *Sofia* merged to Kolkja. Today the settlement counts about 400 inhabitants, has school, two churches and museum. Remarkable, that people both from Kolkja and Sofia have participated in my interviews. *Kasepaa* is a neighbouring settlement of Kolkja. First it was mentioned in 1582. 273 people lived there in 2000. The village has a church. Ninety-five percent of citizens are Old Believers /N1/. First mentions of *Varnja* refer to 1582 as well. It has Old Believers' church that has been worked since 1903, museum and library. There were 262 citizens in Varnja in 2000 (Михайлов 2008: 166, 218, 222, 227).

Another question is whether all rural Old Believers are appropriate for the study? Since it was discovered in the theoretical part that most of Old Believers do not follow the traditions any more, should this part of people be excluded leaving only the Old Believers who still follow the traditions? Since it is difficult to define who to what extent is faithful to the traditions of their ancestors I argue that it should not be a point.

Another issue is generation composition. I would like to interview Old Believers of all generations in order to make the study comprehensive. Nonetheless, the reality is that younger generations leave the villages and try to settle in the towns or even in the other countries. That is why while I will try to find people of different generations, it is very possible that interviews will be conducted mainly with the representatives of older generations.

All in all, Old Believers who live on the Lake Peipus shore in rural areas regardless the age consist the group for the case study. For the exploration of the qualitative

constituent of the research observation and interview were chosen as the methods. For the organization of communication with the relevant people Peipsiaare vald and Mustvee vald municipalities have been contacted.

2.2.2 Interview method

Interview is a conversation between two or more people where one person is the interviewer and others are interviewees (Gillham 2000: 1). Interviewer asks question from the interviewees aiming to gain specific information that they presumably have. Interviews can be met in very different situations of human life and research is one of them.

Research interviews aim to obtain the data from the “first hands” that is an important addition to theoretical part that the research is based on. While the theoretical part only defines the problematic issues and poses assumptions or hypothesis, interviews can prove or refuse them.

Choosing the type of interview

In order to achieve the success in gaining the information, an appropriate type of interview has to be picked. Perhaps, I need to choose a tactics of asking questions that would follow a certain line but at the same time gave me a room for additional questions. This logic is connected with the fact that I have already three research questions and I assume to find answers in the interviews. So, my questions have to cover the dimension of the research questions. From another side, I assume that I might miss some important questions in my list since I do not know completely what to expect.

That is why I see *semi-structured* interview, “a key technique in “real-world” research” (Gillham 2000: 21), as the most appropriate for my study. In the semi-structured interview the researcher has the list of questions prepared, but strict following the list is

not a goal (Berger 2000: 11). According to the answers the interviewer may ask additional questions or omit some if they were already answered or if they do not seem relevant any more. Perhaps, semi-structured interview, as it is seen from the description, allows orientating in the situation's circumstances and managing to obtain full and explicit information.

Apart of semi-structured interview I have to include into my conversations one more part – introduction, or how Berger (2000: 12) calls it *informal* interview. It is rather regular conversation between researcher and a person who presumably may know useful information. This conversation is not very useful to obtain the information – it rather helps to researcher to gain the confidence of the interviewee. In my case I will use it as a presentation of myself and my research in order to set up the connection with the interviewee and to start the conversation in a logical and friendly way. Moreover, in this part I have to emphasize that interviews are anonymous and totally safe for interviewees regardless of what they say.

Choosing the style

In order to get relevant and efficient outcomes, interview has to be provided very accurately and attentively. Of course, the researchers can have a guess what kind of information they may gain, but it is of a high importance to obtain the information without preconception.

“Researchers who “know” what they want to find out are like the doctors who “know” what a patient’s problem is: they may well be right. But they may equally well miss something. The doctor who only half listens to patients, and doesn’t draw them out, may fail to register a history of symptoms that doesn’t fit the familiar pattern of common ailments. It is easily done”. (Gillham 2000: 3)

Before conduction the interviews I made the assumptions that are mentioned in the research questions subsections. Nevertheless, the results can be slightly or completely different and my task is to be ready to hear and define the truth.

Another important moment in interviewing is keeping neutrality. The information of “how”, “what” and “why” the interviewee treats the waste should be provided without any hints how I expect it has to sound. Saying in other words, the questions have to be totally neutral and represent not my own view as well as my behaving in general also has to give no clue. Whatever the results are, they are appropriate for the outcomes of this study and that is why personally I do not have an interest to lead the discussion to a certain way and incline the interviewees to follow the special pattern of answers.

One more question that has to be solved is how many interviews are needed. Actually, the more – the better. Although, interview is quite time-consuming process. “A hundred on-hour interviews could be as much as 5000 hours of work” (Gillham 2000: 9). Considering this fact I have to decide what number of interviews would be both relevant and bearable. Therefore, I aim to visit at least three villages (bigger part) of Old Believers villages and I will stop interviewing when the answers will repeat each other.

Interviews will be conducted in Russian language – native language of the interviewees and the author.

Choosing the questions

Questions for the interview have to cover all research questions. Besides of that interview questions have to be logically structured that would predict loosing of the conversation line as well as to help me later in analyzing.

In order to understand how Old Believers utilize the waste it is needed to ask them what they do and why they do that. The direct questions like “Do you sort the waste?” or “Do you utilize hazardous waste to the special trash bins?” would contradict to the principle of neutrality that was discussed above. That is why the questions were designed in the way to force people describing the situation just how it is (see questions 1-5).

Questions 4, 6 and 7 allow understanding how Old Believers' have perceived the change. Question 4 aims to complement the issue of facilities. Questions 6-7 help to understand what have been changed in practices and also assume to define the attitude while the direct question regarding attitude is deliberately skipped. The questions are posed accurately avoiding any judgment. For instance, uncontrolled dump is also a facility for waste utilization, hereby, using the "facility" is not always the appropriate way of waste treatment. That is why the question about which facilities are used and which are not used by the interviewees is neutral.

Questions 8-9 aim to find the connections between waste treatment practices from one side and traditions and beliefs from another side. They cover a wide range of time from early Old Believers age up to nowadays. I also assume that some information regarding this research question might be obtained from previous questions since describing of waste utilization process may inspire people make comments themselves regarding how it is connected to the traditions.

All questions in Russian and English languages can be found in Appendix 1. Information regarding interviewees is contained in the table of Appendix 2.

2.2.3 Observation method

Studying important and interesting details in practices may stay behind the research if the research is based only on theoretical data and interviews. The reason for that is that some everyday practices and parts of life organization might not be visible for the interviewees since that have become for them routine and too usual. For this matter *observation* method is a solution that presumably can bring new details and outcomes.

Observation is a qualitative research technique that provides the opportunity to study people in real-life situation (Berger 2000: 161). Saying by other words, the researcher dives into the environment of studies to see everything by own eyes. Since the researcher is concerned about the narrow interest of the research questions, he/she can

emphasize their attention to the certain objects, behaviours, etc. that might be missed in academic literature or other sources of information.

Another important benefit of the observation is possibility to distinguish reliable data from not reliable one. Due to time, language differences, different visions of the political or social situations among academics and other obstacles inaccuracies may be met even in scientific papers. That is why own observations is of a high importance for the particular study. Exemplifying on my study, uncontrolled piles of garbage around the home of interviewees would not convince me that the people are excellent in waste treatment.

Berger (2000: 162) defines two possible roles of researcher in observation process: *participant as observer* and *observer as a participant*. In the first case researcher joins the group of people and environment that he/she studies. Being a functioning part of the group the closest understanding of the situation, phenomenon, behaviours, etc. can be reached. Nevertheless, this method is not always possible to apply in practice. For the case of my MA thesis that would mean staying in Old Believers society for some period of time. Since Old Believers have some waste treatment practices that have been changing along the year caused by season changes, the period of time ideally should be equal to one year. It would require too much resources that would lead to the situation when spent resources are not worth of the goal. Turning to smaller scale, “participant as observer” type of observation assumes hosting a stranger (i.e. the author) at own home and even short period of time would be of high complexity. All in all, this method is good for studying “open” groups, such as music festival participants or library users, when merging with the group is natural and easy process. However, observation that is tightly connected with private life causes too many obstacles.

In contrast, “observer as a participant” type of observation is quite applicable for my case. It basically means interaction with the group and environment as an outsider. Being at spot the researcher observes how people behave, things happen, etc., but is not involved in the process themselves. For the case of current MA thesis this way of observation is more convenient and reliable. Showing private territory and waste

facilities might not be a problem for most of people. Since coming there is spontaneous there will not be time to change the things that proves reliability of real situation. Moreover, unexpected and not understandable facilities and things can be noticed and explained at the spot.

It is important to clarify that key words are “facilities” and “things”. “Behaviours” mainly are excluded from the observation objects with the exception of the case when waste treatment is so poor that it is visible without any explanations. Otherwise, observing “behaviours” is of high complexity. It is caused by the reason that waste treatment practices are manifested in time. Perhaps, in order to see how people treat advertisement booklets it is needed to wait when they receive them. Practices connected to utilization of hazardous waste may take months. Moreover, being observed people might act in “right”, but not “usual” way. Nevertheless, I assume that facilities are quite reliable indicator of Old Believers’ practices.

2.3 Problems with the research design

This MA thesis aims to investigate research questions as accurate as possible. However, limits in time, scale and other obstacles complicate the work. They will be discussed in the following subsection.

First restriction is limited time and human resources. The research is based on interview and observation of Old Believers group who live at Peipus Lake shore. Personal meetings with people from this region are time- and energy-consuming. Thus, to arrange big number of meetings is of high complexity. The negative consequence of small number of meetings is limited data. While this limited data can be totally correct and reliable, some details can be missed. Nevertheless, limited number of interviews and observation dealing with a big group of people is a normal practice in academic world. This error is implied by default.

The second limitation is connected to remote location of studying spot. For instance, only two buses are available to Kolkja at convenient hours. The infrastructure is underdeveloped. Perhaps, detailed map with streets' names is absent, at least on internet maps. There are tourist information centre, cafes and museums in Kolkja, however, they work only during certain short hours and usually have to be asked for opening in advance. Infrastructure in the others villages is absent.

Some unexpected limitation popped up from the side of interviewees. Some of them were limited in time and some of them did not want me to come to their households. For instance, first woman who went to the interview to the municipality apologized and said that she does not want me to go to her place. Also she said that she has only twenty minutes since she is in a rush. Another case when I was limited in time happened with interview in Kasepaa. Since distance from Kolkja to Kasepaa is considerable if to take it by foot (1,5 hours) and since it was snowing, previous interviewees suggested to pick me up to Kasepaa if my interview would not take more than twenty minutes. I had to agree since I had arranged meeting there, but did not expect that the distances are so long and the weather is bad.

The fourth restriction lies in psychological dimension and related to the qualitative methods of research. As Berger (2000: 124, 166) says interviewees or observable individuals may provide not relevant information. Perhaps, they may lie, they may forget how the things went in reality, they may tell to researcher what he/she wants to hear, act in a way to look better, etc. It is almost impossible to be protected from such kind of attitude. The only way to avoid inaccuracies related to psychological features of people is comparing information that was obtained from different sources. Moreover, question 5 about problems with the waste in general and inappropriate deeds of neighbours aims to discover the problematic areas while personally interviewee does not have to blame themselves.

One more vague moment of this research is that people who were pointed by officials participated in five from seven interviews. While converting into persons this proportion looks better (six people were recommended by municipality and six not), still a question regarding how random these participants are is opened. Basically, it can

mean that municipality recommended the households that represent proper waste utilization methods. However, since many of those people pointed problems freely, I assume that choice of municipality regarding the interviewees rather depended on ability of people to express their thoughts clearly additionally to their friendliness. I also doubt that people in municipality know in detail how people utilize different types of waste that could force their decision.

The last obstacle for the MA thesis is availability of information regarding facilities of new waste recollection system. Open sources (official webpages of the state institutions, academic papers, etc.) provide access to general data without going into details. Moreover, available data usually represent statistics up to 2009. Available information often points the percentage of waste that was treated, however, do not specify the ways of treatment and percentage of treated waste relatively. For example, what amount of paper, glass and plastic have been recycled in Estonia respectively? What and how much of materials were recycled in other countries? How many trash bins are available for Estonians and what is the distribution of them? Answers for all these questions were not found by the author. I have contacted the Ministry of Environment for this matter, but respond was not obtained. Although, I assume that this information can be available in Estonian language, while I made requests only in English and Russian since Estonian is out of my language abilities.

CHAPTER 3. DATA ANALYSIS AND PRESENTATION OF RESULTS

In this chapter the information obtained from interviews and observation will be described and analysed. Detail information in relation to the process of conducting and editing the interviews and observation will be narrated in the first subsection and the analysis will be represented in the second subsection. This chapter contains many quotations of the responders that will allow to a reader (in the case of need) to size up regarding the situation with waste practices among Old Believers and to compare his/her understanding with the author's opinion. The chapter has descriptive character while key outcomes will be provided briefly in the Conclusions.

3.1 Data obtaining

All together seven interviews were conducted. Six of them involved eleven people that represent nine households and the interviews were focused on the waste issues from the household keepers' point of view. The seventh interview was conducted with the Head of Peipsiaare municipality and aimed to collect statistical information regarding the population and waste facilities in the region. All together I committed three trips. First of them covered Kolkja and Kasepaa, second one – Raja and the third one – Varnja. In general twelve interviewees participated in the research. Eleven of them were females and one was male. Four households were observed and at two of them I got permission to take pictures. As it was expected, most of interviewees were in their 50s-60s while one of them was 42 years old and one of them was over 80 years old. More detail information can be found in the Table 6.

Table 6. Interviews' and interviewees' description

#	Represented/Observed households	Gender	~Age	Relations	Recommended by	Occupation	When	Where	Methodology used	Duration of record
1	2/0	F	40	Friends	Municipality	In a cafe	01-04	Kolkja	Interview	18:25
		F	55		Municipality	In municipality			Interview	
2	1/1	F	55	Spouses	My friend	Businessman	01-04	Kolkja (Sofia)	Interview, observation, photography	01:01:43
		M	60		My friend	Businessman				
3	2/1	F	80	Mother and two daughters	Accidentally	Pensioner	01-04	Kasepaa	Interview, observation	20:00
		F	60		Municipality	In a museum				
		F	50		Accidentally	-			Interview	
4	2/1	F	65	Friends	Politsei	Church	17-04	Raja	Interview, observation, photography	36:59
		F	65		Accidentally	Church				
5	1/1	F	65	-	Previous interviewee	Pensioner	17-04	Raja	Interview, observation	21:37
6	1/0	F	50	-	Municipality	Library	02-05	Varnja	Interview	39:52
7	0/0	F	60	-	Municipality	Head of municipality	01-04	Kolkja	Interview	07:07
Total		F/M			Recommended by mun-ty/not		Nº of trips	Nº of villages		
7	9/4	11/1			6/6		3	4		

Conducting of interviews

Interviewees were found in different ways. Two of them from Kolkja are parents of my acquaintance from Tartu who helped to arrange our meeting. Others interviewees from Kolkja, Kasepaa and Varnja were found with the help of Peipsiaare municipality. We agreed upon the conditions that I would come in a convenient day to the municipality, they will call to potential interviewees and arrange out meetings at the spot. Interviewee from Kasepaa lives in the next house of her mother and sister. When I arrived to her place she was not at home, but people recommended me to look for her in the next house and she indeed was there with her relatives. Thus, her mother and sister were involved in the interview almost accidentally. In the case of Mustvee municipality arrangement of the meetings was more difficult. I was told by the municipality that they cannot help me, but gave a phone number of Politsei employee who is also responsible for some Old Believers organization. The employee advised me two persons and gave their phone numbers. Therefore, I arranged the meetings calling to those people. One of them did not reply the call and another case was successful. Nevertheless, the responder worried to be interviewed alone and that is why invited her friend for our meeting. I found that interview especially successful because being friends they discussed some ambiguous questions actively and went to the history deeply and with interest.

It was nice and friendly atmosphere during the interviewing. In the beginning people worried about their incompetence since they believed that I expected them to know old specific traditions and ceremonies related to the waste. Another their concern was related to the worry that they would not know what to say since their practices in waste treatment are too usual. Nevertheless, when the conversations were started, people went into the conversation and provided sufficient information.

As it was mentioned before the distances between households are big. Fortunately, interviewees themselves offered me help and brought me to the next interviewees and to bus stops by cars. Those gestures were of high importance for me since the weather conditions were not favourable in two of three days of interviews. Many interviewees

suggested tea and cookies. I also got some presents and an invitation to visit the interviewees from Sofia one more time in summer “when it will be beautiful”.

For the recording interviews I have always used two voice recorders. All tracks were recorded successfully. The quality of the records is good enough to understand the words easily.

To the respect of the interviews’ content I can say that already fifth interview I found as pretty much repeating the previous information. Of course every interviewee uses own language and emotions to describe the situation, but converting that into indirect speech the information would look the same. Nevertheless, I wanted to cover one more village and for that matter went to Varnja. That interview was interesting from the point of view of describing local problems and facilities, however they still were very similar to previous speeches. Thus, I realized that all essential information has been collected.

Talking about reflection of my personality on the research next facts can be pointed. At the moment of research conducting I am 28 years old Ukrainian who has been lived in Estonia less than for two years for studying purpose. During this time I got well acquainted with Estonian urban waste utilization system as an end-user. In Ukraine I had worked as a journalist for four years and conducted many interviews in my life including the most famous Ukrainian celebrities and companies’ directors. This experience allowed me to feel free interviewing people. I speak Russian as my first language and it also contributed to easy way of communication between me and Old Believers.

Data transcription

All records were transcribed word by word and printed out. I did not translate the interviews into English, the language of this research. However, in the case of necessity I translated certain parts for quoting. In every interview up to three persons from up to two households participated. Nevertheless, in the analysis I did not specify exactly to

whom the replica belongs since the interviews were promised to be anonymous. However I do specify the gender and the age umbes in order to get the reader some picture of the context of the provided text. Also I specified the code of interview, code of interviewee (if there were more than one) and the page of transcription in a case of demand to see the quotation in original language. Thus, the information of the interviewee to who belong the replica will have next look: “/Female in the 60s, Ac5/” where “Female” is gender marker, “60s” points on age, “F” is the code of interview, “c” is the code of interviewee and finally “5” is the number of page in the transcript.

None of the interviews followed the list of questions prepared before strictly. Perhaps, it was connected with the fact that interviewees had a desire to share information that they had and talked about issues related to other questions themselves. I asked extra questions to clarify the issues that seemed for me not understandable or that just needed more specification. In spite of lacking firm structure, all questions that needed to be asked were answered and interviews had semi-structured character as it was planned in the beginning. With the rare exceptions questions did not express any attitude towards the topic and did not give a hint of proper answer. Nevertheless, since the conversation was alive and there was no time to assess every word, some small mistakes were done. However, I argue that they did not affect the answers since interviewees always kept own lines.

Some interesting information was provided when the voice recorders were switched off. However, I wrote down the main idea of not recorded information to my notebook being in the bus on my way back home. Thus, information was not lost and was used in the analysis without quoting.

Furthermore, I made notes and marks that divided the content onto three main parts that related to three research questions. Some parts intersected, e.g. was valid for two research questions simultaneously. In these parts I underlined the key words that later helped me to form subcategories. For instance to the respect of Research Question 1 that deals with sources and types of waste, I had subcategories “Paper”, “Metal”, “Biodegradable”, etc. They were marked mainly by the first or two firsts letters in the

name of the subcategory. I did not make marks regarding pauses, sighs, etc. because the information that I am looking for is not emotionally painted and I believe that additional marks would lead to wasting of time. The interviews were informal and interviewees used spoken language that is characterized by grammatically incorrect sentences and using of dialect words. I did not edit their speeches since that would not bring any new outcomes for the study while the brightness and beauty of original language could be lost.

Conduction of Observation

Observations were conducted in Kolkja, Kasepaa, Varnja and Raja. Observation included investigation of domestic situation related to the different types of waste in four households and general tendencies in the villages.

Two interviewees did not agree to conduct interviews in their homes that did not allow me to observe their households. The argumentations for that were “My husband feels sick” and “Sorry, I just don’t want that”. That is why one of the interviews was conducted in the municipality building and the second one in the library. Nevertheless, four households were observed. After every observation I drew a map of how waste facilities are located in the territory of household and they can be found in the Appendix 2. Although, these maps are not certain: proportions were not held, plan of the building is approximate (I did not visit all rooms) and also some small objects on the territory of the households (for instance, benches, shacks for equipment) are missed since I concentrated only on waste facilities. The maps helped me to constitute a holistic picture of what interviewees were talking about and to prove that what they said was true. Nevertheless, I did not get any new bright insights from mapping. All houses were indeed very tidy that made me think that the hosts cleaned them before my coming; however, I am quite sure that no one of the responders changed facilities in order to make better impression.

Another part of the observation was focused on the villages' streets. For that matter I just walked in different directions and paid attention to the things that could say something about the attitude of locals towards the waste. Thus, main findings were a few small dumps and many interesting ways of re-usage. Otherwise, I would characterize the streets as clean.

One more goal that I aimed was to find as much waste containers as possible and to check their conditions: are they overfilled? What is language of the records? Do containers contain only allowed types of waste? My observation revealed that containers are not full, they contain information in Estonian language and the thrown waste is appropriate. However in the case of Varnja a bag with waste was found next to the container.

Apart of the maps some photos were taken. All together I counted forty six relevant pictures and some of them will illustrate my narration below. I did not keep diaries since the observation time consists of three days and did not include too much information. Information that I got was fixed on the pictures and my maps.

3.2 Data Analysis

Content analysis has been used in order to find general tendencies and important details from the interviews. Being good acquainted with all answers I grouped similar answers and usually this information will be provided in descriptive forms supported by one or two the most remarkable quotations. In the case of the information that was provided only by one responder and that was not repeated by others, I specify that this answer represents isolated case.

3.2.1 Ways of waste utilization

In the first research question I aim to find out how Old Believers from rural areas utilize the waste. This work is of high importance since it will help to understand what they do,

how they do and why they act in the certain way and not different one. This research question is directly related to the *Competence* element of the practices. The main emphasize will be done on sources of different types of waste and ways of their utilization. Additionally *re-using* and *problems* subsections will be considered for comprehensive analysis of the material.

Sources of waste

On the whole all the responders agreed upon the idea that main source of waste in their households are shops. They obtain fundamental part of their plastic, glass and metal waste from there. Responders expressed quite negative attitude towards big amount of packages that they are forced to buy. Old Believers emphasized that they did not have so big amount of waste before and it changed in early 1990s when producers started to pack everything in plastics:

“We did not have waste before. Only old clothes. [...] Now everything is packed [in plastics], but earlier they wrapped that in paper”. /Ab1/

“Mostly from the shop. All these packages – plastics. And only with them there is a small problem: really a lot! Bread – packages are even there. You don’t know – is it needed or not – really a lot! Or look at these yogurts and dairy products – chemistry is everywhere. It is not allowed to burn it”. /Female in 50s, LMa1/

In respect of paper and cardboard waste people mentioned newspapers and advertisement booklets. However, people in Kolkja mentioned that they do not receive paper advertisement while people from Raja and Varnja said that they get lots of them. Later I discovered that advertisement booklets come inside the newspapers, so, I assume that my responders from Kolkja just do not subscribe the newspapers and it became the reason why they do not meet this type of waste.

Old clothes is not a considerable part for waste build-up in Old Believers' families. Before coming into the category of "waste", clothes and shoes serve for decades and changes its status from smart to working:

„For going outside and for fields – everything [clothes] is different. The same with the shoes. For field – something one, for the shop – another, for church – again different”. /Female in 60s, JNa2/

Hazardous waste usually is represented by bulbs, batteries, paints, old medicine, oil, etc. Usually people buy them for housekeeping and want to utilize when they are expired or not working any more. Also old household, electronic and electric appliances, for instance, kettles, fridges, etc. constitute the source of waste.

Additionally, being rural dwellers Old Believers obtain waste from the activities that are essential for keeping private house and household. To this category belong garden garbage, leaves, sawdust, repairs remains, etc.

Paper and cardboard

It was revealed that any of the villages has separate container for paper and cardboard. According to the words of Head of the Peipsiaare municipality those separate containers for paper and cardboard would be useless:

“Of course, it is possible to throw the paper to that yellow box, waste container, but paper burns in the ovens – we have ovens in every house – this paper burns there. Therefore, we even do not need them. It is from time immemorial that you still need a piece of paper to set the fire – so, either flinders, or paper. That is why paper from time immemorial comes to the oven”. /Female in 60s, G1/

Many interviewees pointed that they use all paper and cardboard for kindling the stove. In the past stoves were used both for cooking the food and heating the house. Today

most of Old Believers use gas cookers for cooking while heating the house is still the essential role of the stoves. The stove contains the hole of the size where firewood, paper and small waste can go through. However it is not appropriate for volume waste at all (Pic. 1).



Pic. 1. Stove in Raja



Pic. 2. Collected paper for kindling the stove in Kolkja

For the matter of kindling the stove Old Believers collect paper either somewhere close to the stove (Pic. 2), or put it directly into the stove, or have it wherever it is convenient

and take it in the moment of need. Nobody of the responders mentioned disposing paper neither to private, nor to common containers that proves words of the Head of the municipality.

I also noticed that usually Old Believers are selective in what material they can burn in the stove. For example, one interviewee mentioned special signs on the packages that allow material to burn:

“For us “paper” is everything that burns. Sometimes we even put into the stove some packages from bread because there is a sign that it can be burnt in the stove. We don’t have problems with paper nowadays”. /Female in 40s, Na1/

Nevertheless, not all of the responders burn advertisement booklets. Some of them argue that those booklets are “made of plastic” and do not burn. The normal practice for those responders is throwing booklets to the private waste containers.

Utilizing paper and cardboard through burning is an ancient practice that went to Old Believers from previous generations. However, it was revealed that nowadays not all types of paper can be burnt successfully, for instance, advertisement booklets. It implies that the process of paper separating experienced changes.

Biodegradable waste

Biodegradable waste is one of the main sources of fertilizer in every household. Usually it consists of food remains, for example, potato peels, food that was not eaten, field waste, leaves, etc. However, people who have pets feed dogs and cats by the food that they have not eaten. Still, every household has enough biodegradable waste.

Every interviewee pointed that they collect food remains to a separate bucket. Furthermore they throw it away to a compost pile. According to the technology, people also put there hay, leaves and cover by sank or peat. Since it is built in the way to make

the effect of greenhouse the waste rots. One interviewee was talking about this process with a big delight and proud:

“Small red worms appear there. Some time you come here to have a look – and you see only red, pure meat. There is no what we left there any more – everything was refaced! [...] Or, perhaps, when it rains and water is warm, you come there, put the hand – and pure meat. How did they appear there? This is nature, here we are. [...] They [worms] want potato peels a lot”. /Female in 50s, LMa9/

My observations revealed that people either locate their compost piles close to barn and try to organise for them common border, or organize the piles separately (see Appendix 2). The borders are defined either by wooden boards or by corrugated asbestos boards. Some compost piles are located in the separate boxes (Pic.3). Some people cover the piles and some not. As far as I understood this cover facilitates converting biodegradable waste into fertilizer, but some people are lazy to put it and then take off all the time when they add something to the pile and that is why they neglect the usage of the cover.



Pic. 3. Compost piles in Raja.

All in all, Old Believers have constant considerable amount of biodegradable waste and certain ways of its utilization that came to them from their ancestors. Biodegradable

waste is an important source of fertilizer for the Old Believers and they do not have a habit to throw it out to the waste containers.

Plastic

Plastic is a main source of waste that invokes difficulties in utilization for Old Believers community. With the exception of some plastic cups from yogurt and dairy products that are used as pots for seedling, usually people have a will to get rid of this type of material. The most common way of plastic utilization is containers:

“Everything what is new – plastics, synthetics – goes to these new [green private] containers. Those, that Mother-Earth cannot accept and does not have to accept”. /Female in 60s, Nb4/

Many responders mentioned that they do not want to burn the plastic since it causes pollution in chimney. Nevertheless, one of the interviewee confessed that she burns the plastic. She mentioned that she has heard that it is commonly believed that this way of utilization is not appropriate and may cause problems. Nonetheless, according to her words she incinerates it for many years in her stove and sauna and has not noticed any problems. Remarkable, that this responder also pointed that waste utilization company empties her container only once per year. I assume that she aims to produce as less waste as possible in order to save money.

Another interviewee mentioned that burning of plastics negatively affects the stove and it is out of the interest of his family to burn it. Otherwise he has to clean chimney more often and it is quite complicated process. Usually he cleans the chimney once per year. However, it was not revealed through the interviews if any of responders who argue against burning of plastic experienced in practice negative effects of this process.

Metal and Glass

None of the responders expressed difficulties regarding how to utilize metal and glass things. Some people collect metal and glass jars into separate bag and then bring them to the common container for packaging waste. Usually they do it by their way to the shop or another place that they need to visit. Since villages are long and it is difficult to get many places by foot, people widely use cars. That is why according to their words bringing a bag with tins and metal waste does not cause a problem. Additionally other ways for metal utilization have been mentioned.

One of the ways is collecting metal waste for selling. There are no special points for that in the villages, however, people know those spots in Tartu. Usually it is the responsibility of men. And if they have some affairs in the town, they also take the bag with metal. Unfortunately, since the responder did not do that herself, she could not bring additional details for description of this utilization way:

“I buy metal jars for cat. My brother collects the jars and take them somewhere, I don’t know where to. Probably he sells them as metal. Yes, he sells them. Iron, metal. They even pay for that – just bring!”. /Female in 40s, Na3/

Another way represents throwing metal waste to the own containers (“green boxes”). The interviewee who uses this way explained that she finds it the most convenient since the container is close to her house and she can throw metal jars directly after usage.

Hazardous and volume waste

People did not mention problems regarding utilization of hazardous waste. For the used batteries people in Peipsiaare have a special box at the post office and people in Raja at the Konsum supermarket in neighbouring Mustvee (Pic.4). People complained that nowadays too many devices work with batteries – clocks, lighters, medical device to

measure pressure, etc. Therefore, they require much more batteries than they used to use before:

“Nowadays everything is with batteries: clocks, different devices – everything only with batteries, batteries... Somebody, indeed, would just throw it out. But we have many. That is why I collect them to a bag and on my way to the shop throw them to the special container. Batteries, bulbs – we put them there”.
/Male in 60s, LMb5/



Pic. 4. Box for batteries in Mustvee Konsum.

Interesting way of utilization for car accumulators and some other electric and electronic appliances has been revealed. Old Believers collect them and then time to time businessmen from towns come to their region and take these things for free. Usually they need them as spare parts. If they know some local people already, they come to their homes directly. Otherwise, they go to the shop (the most popular place) and ask if somebody has old car accumulators, domestic facilities, etc. Old Believers are used to this practice, and collect old electronic facilities for these people.

“We had collected three or four car accumulators – they came and took them. Once even came and asked about tires. I don’t know why they needed it. Somebody told me that they need it to fortify banks”. /Male in 60s, LMb5/

Remarkable, that the practice of collecting waste for re-usage by businessmen is not new. It existed in Soviet time as well as even much earlier. Some of the interviewees told me of those people who collected old clothes and literary garbage – ragmen („старъевщики“). Instead people got dishes, for instance, a mug. According to interviewees words it worked about sixty years ago and earlier. Thus, I can conclude that this practice is old and exist as entire for ages, however products are changing according to the demand of time.

Turning back to the hazardous waste, people in Raja also specified the controlled “dump” (it will be described in detail later in the subsection 3.2.2) as a place where they dispose some electronic and kitchen appliances. One woman said that she puts her old medicine to plastic bag and throw it to her domestic waste container.

Utilization of volume waste, e.g. fridges, people did not point as a problem. People said that in the case of need they bring volume waste to the towns. Usually this is a responsibility of men in the families that is why women could not specify exactly what places accept this waste. They just pointed that men bring this waste to Tartu by cars. One woman said that her husband works at building company and has a possibility to utilize volume waste there. This is a good example of how practice is related to other circumstances: in the current case it is related to occupation.

Turning back to utilization waste, the woman from Varnja said that there is a man in Kolkja who collects volume waste for payment and later brings it to Tartu for sale. Basically, it is not a problem to utilize volume waste:

“People find the solutions. Because most of them have cars, children, appropriate jobs... they find the ways”. /Female in 50s, T8/

In general, Old Believers did not mention any problems regarding utilization of hazardous and volume waste.

Old clothes

Talking about utilization of old clothes Old Believers felt confused. I got an impression that usually they were surprised to hear that clothes belong to waste. When I asked them how they utilize it I think that they had a thought that probably there is some special way of its utilization (for example, special containers or organizations) that they have missed. Some interviewees even asked me about the correct way of clothes utilization:

*“We pack it, if we have, and put into green box. Where should we throw it?”.
/Female in 40s, Na1/*

“We burn some... and where do we have to bring it? Leather will burn and rubber boots we don't use any more. We don't have anything rubber for long time. And leather old jacket or nylon will burn little by little. Last year I collected four big bags of old clothes – bag on bag – and it had been burnt easily. And no smoke! And then a small pile of ash, about for one bucket. It was clean, everything was burnt”. /Female in 50s, LMa2/

When I exemplified that it is possible to gift old clothes to new owners, the interviewee extended her answer:

“Yes, usually we give old clothes, there are many good things. Yes, we give it. There are some people here that are kind of homeless. If something left: coats, etc. – we give to them”. /Female in 50s, LMa2/

Also some interviewees mentioned that old clothes can be used as rags that allow saving money on buying special rags from the shops. One of the responders used word „ветошь“ („rags“). I myself have never heard this term before and asked her to explain it. She clarified that „ветошь“ means old clothes reused for cleaning or other needs for house-keeping. My interviewee said that they have special bag for these rags, however only cotton clothes is good for that. In contrast, synthetic cloth is not capable to absorb

water that makes it not appropriate for re-usage. The responder also added some interesting details:

“Earlier every enterprises had big bags with rags all the time. For instance, for those cases where wipes are used now. There were rags before. All these cloths. T-shirts that could absorb everything... in all those auto repair shops and everywhere“. /Female in 50s, T1/

Thus, Old Believers do not meet the problem of clothes and shoes utilization often. They do it one time per a few years: more or less good clothes are gifted to poor people and the rest either burnt or used as rags.

Re-usage

Reusing of materials is very common among Old Believers. This is an integral part of their life-style. By nature, Old Believers are very economizing.

To the widespread types of reusing materials belong using plastic cups from dairy products (yogurt, sour cream, cottage cheese, etc.) and boxes from other products for seedling (Pic. 5). Most of women mentioned that they wash them, collect and use as pots for seeds. Moreover, they widely reuse not only plastic cups, but also soft plastic bags from milk:

“For example, I cut milk bags in a half, then make holes in the corners, then turn a bit in the edge and then fulfil with peat and soil for seedling. That is it, it grows. It is important that extra water goes away.“ /Female in 60s, F3/



Pic. 5. Seedling in the boxes from herring and cookies

Apart of that other types of tare is also used:

“Also big styrofoam boxes from fish – we collect them near shops. Load soil there, plant zucchini, eggplants, peppers – everything grows. By the time when ground is warmed up, the plants will be ready. [...] I grow a lot: and cucumbers, and onion, and a lot-a lot – and we sell everything at the market”. /Male in 60s, LMB6/

One more interesting way of reusing of plastic bags is handcraft. Women collect the bags, then cut them on narrow strips and then knit pads by knitting hook. One of the interviewee mentioned that women who are very excited about knitting, can knit not only pads, but everything. They masterfully combine different colours and make bags, toys and decorations for the houses.

Some really creative ways of reusing were noticed. Thus, old tires were used as a shape for flowerbed:

“And we organize flowerbeds from old tires. Here we have big ones close to house and behind the house. It is good when grass doesn’t cover everything, it looks pretty. So, you see, in these wheels I plant geraniums – and I put pots with flowers just there. And when different flowers spread – what a beauty! Then they

blossom: and petunias, and different-different flowers. But firstly tulips, crocuses, narcissuses. Then they fade – and new flowers come to their place – that's it". /Female in 50s, LMa5/

The same responder mentioned that she also uses old styrofoam and plastic boxes as flowerbeds. According to her words they look like “blossoming hills”.

One responder told me that they use sawdust as prevention from chaotic grass growing near the fence. When this family saws and hacks the wood for the matter of house heating, then they get plenty of sawdust. Later on they distribute the sawdust under the fence. Sawdust presses the grass and it interferes grass growing. As a result the territory looks tidy. Another reason for this practice is preventing muddy spots since sawdust absorbs the wet. If some sawdust still left, then the family puts it under the bushes. And the rest goes to compost pit.

One more traditional way of waste reusing is using of ash as fertilizer for fields. Old Believers collect ash into big bags. Later they spread it twice per year: in spring and in autumn when the soil is plowed. One family in average collects two one meter high bags by the time of plowing. Even old ladies are informed regarding chemical advantages of this material:

“In autumn we plow the soil, this is nitrogen. And ash is potassium, calcium. This is very good!”. /Female in 60s, F6/

On the whole I got an impression that Old Believers can reuse almost everything. I tried to challenge some of them by the questions like “What would you do if you had to utilize...?” and if the answer was not “I will burn it”, then it was some way of reusing. For instance, one responder mentioned that she would be glad to reuse her old tiles as cover for garden tracks since it would protect them from wet and mud. Another responder remembered that in the time when containers for hazardous waste were not available children played with old batteries as with toys. I got an impression that this community is totally opposite to the current “generation of consumption”. They



Pic. 6. Fence made of ski in Kolkja



Pic. 7. Decoration for door made from newspapers, plastic bags and bulbs



Pic. 8. Flowerbeds and playground for children made from tires in Varnja

expressed regret that nowadays people including their children prefer to buy new things than to repair old ones and it has become a tendency.

Other examples of materials reusing are represented on the Pic.6, Pic.7 and Pic.8.

Problems

Old Believers who own the land that borders with Peipus Lake also possess the shore. Interestingly, that this part of shore can be separated from the main plot. For instance, one of the interviewee mentioned that he owns one plot and two shores because he was gifted one by his neighbour. Apart of the advantages to possess the shore, Old Believers take responsibility of this land. They complain that the lake has become dirty and they are the ones who have to clean it since government does not pay attention to this problem:

“When spring comes, ice melts, I walk through the whole territory, collect all waste: jars, packages that flew from the lake. Fishers are allowed to go to the lake by cars – this is our painful question – everything is left there, built-up, and by waves, by storm surfed to the beach. Jesus Christ what happens here on spring!” /Female in 50s, Ac2/

When the voice recorders were switched off, the interviewee additionally asked me to retell the problem regarding pollution of the lake to some higher institutions since, according to her words, locals suffer a lot due to this problem.

In Raja people mentioned a problem with waste pollution that comes from summer residences of cottages who live in Kohtla-Jarve. These people own cottages nearby Peipus Lake and visit them either on weekends or/and in summer time:

“Some people throw waste wherever they want. Especially now when these cottagers appeared. [...] They have own community and they have waste containers, but they have to pay for them. And in order to pay less they bring the

waste somewhere. Here we are. [...] For example, they go to the forest to pick mushrooms and leave their waste there. I have heard many stories like that”.
/Female in 60s, F1/

One more source of problems that was pointed in Varnja is fishers. Estonian government issues 300 000 licences for fishing annually. Fishers from the whole Estonia and Latvia come to Peipus Lake for winter fishing. Apart of noise that their cars make they also disturb locals with the waste that they leave. Peipus Lake shore is equipped neither with the waste containers nor with toilets for fishers. Since the fishers are not local they do not take care of environmental issues and do not take their waste back to cars in contrast with local fishers. Moreover, people are concerned that uncontrolled waste might have bad influence on children’s attitude towards nature and on forming their behaviours. All these facts annoy local inhabitants very much.

“Ideally we want car fishing would be prohibited. The state has to build special alternate road for that and car parking. [...] My husband works in Finland. Once men went for fishing and they were not allowed to go to the river. Even though it is very different from moving by car on the lake. But we do have cars coming from 3 am, cars by cars, all go to the lake. Everybody has eaten – there are packages, – drank water... is it a dump?!” */Female in 50s, T5/*

Apart of tourists and fishers one more source of waste in the lake is the waste collected to big bags in order to fortify the banks. Otherwise when water comes out of banks it ruins roads and brings other damages for households. So, from one hand this measure is necessary for the villagers, but from another hand it causes environmental pollution:

“There are many [bags with waste] next to the lake. We more or less ok – the lake is far away from us, we are separated by some land from the lake. But further, at Kasepaa, those villages – houses stand directly next to the lake, there is water in front of the road. Then those people fortify with the waste, everything what was collected – everything to the lake. In order water wouldn’t destroy the road they put

gum there, old tyres – everything like that. Many-many bags with waste, then cover them by leaves – and water wash out everything”. /Male in 60s, LMb3/

Another problematic issue that was revealed is neglecting of rules of waste sorting by some villagers and local enterprises. First of all it is convenient to get rid of the domestic waste in order not to pay or to pay less for waste utilization companies. For this aim waste is thrown out to municipality’s yellow containers instead of private ones:

“Those containers of municipality – everything is there, and glass, and everything. Nobody sorts it, they put everything there. [...] I saw many times that they bring it there in big cars. Even manufactories, for example, fillet shop. They collect bones and guts. It is good if piggeries take them. But nowadays probably they don’t, so they put all bags with that to the [municipality’s yellow] container”. /Male in 60s, LMb3/

And finally people complained that there are always some people who just do not have appropriate culture and throw waste wherever they want. Thus, one interviewee told a story that woman on the bicycle from Mustvee just threw her garbage away in their village. The interviewee stopped her and pointed that this type of behaviours is not appropriate in their village. After that the woman put the waste in the right place, but did not apologize. The same responder pointed that some people bring the waste to waste containers, but do not put it into them while just leave the waste nearby the containers. She argues that this is an issue of behaviours and culture. In contrast, in a few cases responders emphasized that their children have clean households and would never throw the waste in a wrong place.

3.2.2 Perception of new waste system

In this research question I aim to discover how new waste recollection system impacted practices of Old Believers. How did they perceive it, to which extent they applied it and what are the results.

For the matter to understand changes that happened after 2005 I asked responders what kind of facilities and waste system they used to have before and how new system differs from previous one. In general people defined three periods:

1. Soviet time (1960s-1991)

All responders that participated in interviewing remember Soviet time quite good. On the whole it is seen that they have nostalgic feelings towards that time and associate those years with better life, bigger opportunities and higher incomes:

“How it was before: when a couple married, they of course had a job. Job was available in Soviet time here both for men and for women. So, when they married, they went to work and made a greenhouse and immediately built a house. Went to earn, here-there on weekends, to Leningrad and it was done“. /Female in 60s, JNb7/

Nevertheless, in the terms of waste utilization references were negative. Interviewees complained that there was not organized system of waste utilization and people were forced to get rid of waste themselves in the frames of own abilities, creativity and cultural level. At the same time people obtained much less waste in quantitative terms that did not pose the problem of waste utilization so high:

“Earlier there were no boxes, plastic bags, no jars, no tins. We bought oil into own bottle, it was on tap. [...] Food remains, haulm went for livestock’s feeding. And potato peels were boiled for piglets. [...] We had everything our own: own milk, own meat, everything, vegetables. And we baked bread and the rolls ourselves.“ /Female in 60s, JNa1/

While in general the bigger amount of waste was either reused or burnt, still some part needed utilization. This demand invoked creation of uncontrolled dumps and numerous polluted spots in the forests, lake, etc.

„Earlier [in Soviet time] everything was brought to the forests. Look what happen in our forest! Happened. Even those old appliances...”. /Female in 60s, JNa3/

“Yeah, towards mode of life, towards nature – there are completely-completely different views now. Thus, I would say that the things with ecology are much better now than they used to be”. /Female in 50s, LMa8/

One of the responders provided vivid characteristics of changes that happened in cultural behaving in Old Believers community. His narration allows understanding the attitude towards nature and ecology in Soviet time together with the low significance of cleanliness in general:

“Nowadays, it is neatly and tidily around the households. Earlier people lived somehow without awareness what is going nearby. Just hit or miss. For instance, comes from the field – boots are dirty – goes inside the room. Nowadays it is different: and takes boots off, and takes a shower, and only then goes home. Or, for example, plastic bags from the shops: now you will never see them blown by the wind. People have become more tidy, people started to think that indeed if we do that incorrect, we do it bad for ourselves. Not like earlier: throws and thinks: “Whatever, I do not need it, let it be”. /Male in 60s, LMb3/

All in all, it can be seen the issues of ecology and cleanliness were underdeveloped in the Soviet time. People never experienced organized waste utilization system and dealt with the waste themselves that seemed very natural for them. Uncontrolled rubbish dumps remained a norm at that time.

2. Early years of independence (1991-2005)

After the collapse of the USSR people met new types of waste that came in virtue of market economy. In contrast with Soviet time 1990s years introduced the situation when

almost all products were covered in the package. Plastic had become of widespread usage and brought problems with utilization. At the same time ecological awareness grew. These facts led to the demand of waste utilization facilities. As a result in the early 1990s local municipalities provided trucks that went from household to household and collected waste from the villages' inhabitants.

„There was huge ditch in the parish where kolkhoz ended – behind the kolkhoz, behind the territory. And the truck went – it was allocated specifically for that – it collected waste. [...] It took the waste and it was disposed there. And then it was prohibited and they buried it by bulldozer“. /Female in 50s, LMa4/

In general this system worked in the next way. People collected their waste to big plastic bags, approximately 40-60 litres. Weekly (for example, for Kolkja it was Thursdays) the truck went and collected the waste. After that the waste was disposed to the dump behind the village. When the new legislation based on EU directives run into force these dumps have become illegal and were buried. This solution cannot be considered as appropriate since people disposed to the bags all types of waste avoiding sorting. Thus, it can be concluded that Peipus Lake shores contain a number of huge spots with non-biodegradable buried waste. The question if it is better than uncontrolled dumps left from Soviet time in the forests is discussable. First of all by the reason that lying outside waste from the Soviet time could be utilized nowadays or in a few years. Of course if human and financial resources would be allocated. Although now due to the rush in accomplishing the EU-directives Estonia has a situation when old environmental problems are hid instead of being solved.

3. EU period (2005-2013)

This period represents the time when Estonia got the membership in EU that placed certain responsibility including environmental legislation and actions. In the terms of waste treatment new waste recollection system was introduced and more details are provided further.

Facilities

Introduction of new waste recollection system was accompanied by a list of measures. First of all requirements demanded closing of uncontrolled dumps and creation of controlled ones. Secondly, waste has to be sorted and amount of aimed sorted waste grows constantly. And thirdly, every household got the opportunity to sign the contract with waste utilization company in order to utilize domestic waste.



Pic. 9. Packaging containers in Varnja.

According to the words of responders nowadays they have efficient amount of waste facilities. It was discovered that there are two packaging containers in Kolkja. The size of one container is 4,5 m³, it is painted in yellow colour and that is why also called “yellow box”. Two containers for packaging waste and one common were found in Varnja (Pic.9). Interestingly, that the Head of Peipsiaare municipality pointed that there is only one container in Varnja. I do not have explanation why she provided such kind of data.

According to the words of locals, there are four waste containers in Raja: two of them are for packaging waste, one is for glass and one is common one (at the cemetery). All responders possess cars and mentioned that getting the spots with containers does not make problems. However, they clarified that it would be a problem in a case of car's

absence and assumed that very old people do not use those containers perhaps due to the lack of car. Containers are established in the most visited places – nearby shops, schools, cemeteries, etc. As it was mentioned before, there are also two boxes for used batteries in Kolkja and Mustvee.

Citizens of all villages mentioned that they do not need container for paper and cardboard since they demand them for home heating system and saunas («бани»). However, they are happy to have containers for glass, metal and other packages and argue that they use them constantly in the case of need.

Many interviewees have contracts with waste utilization companies signed. It is common practice to sign one contract for two or three households. In one case this practice was used by the family that owns two houses. Another example represents the case when two sisters who live nearby signed one contract for two houses. Every company offers different conditions of cooperation. In Kolkja, Kasepaa and Varnja people mentioned that they have stable periodicity of when waste companies empty their containers. In Raja people call to their company when the container is full. The periodicity of containers' emptying that was mentioned in the interviews fluctuates between one month and one year. Container can be bought or taking for rent. Usually the size of containers is 140-250 litres and they painted in green colour. That is why people often call them “green boxes”. In the current paper they are also called “private containers”.

Apart of the containers Raja also has a spot where everybody can bring any kind of waste that can be later incinerated by the state. This place does not require payment as well as people are not paid, too. People call this place “dump” (“свалка“), however it does not represent a dump is a classical understanding of this term. This spot was opened by the municipality about five years ago. Usually people use it in the case of need to get rid of old furniture and other waste. There are containers for packaging waste nearby the dump as well. This place was located in 1,5 km from one interviewee and 2 km from two other interviewees in Raja. They assessed this destination as “not long”, however, mentioned that in a case of absence of car it would invoke difficulties.

One more controlled dump is located in Mustvee, the next town from Raja. Old Believers said that it has been existed since Soviet time. Nowadays it is paid. You may bring up to five kg of waste for free, without payment, and bigger amount of waste will be accepted for payment. The dump has guardians and it is not allowed throwing waste there for free. One of the interviewees mentioned that recently her son brought there some debris and paid forty eight euro for that. She assesses this amount of money as “expensive”:

“It is expensive. But what can we do if there are no other options? It is no appropriate throw waste away wherever.” /Female in 60s, JNb8/

In general it can be concluded that proper waste utilization system in the terms of facilities has formed about five years ago. Nevertheless, relatively long distanced do not allow good accessibility to those villagers who do not have a car. From another hand while territorially the dwellings are long the population of the villages is quite small and by this reason limited number of containers and dumps is understandable

Role of educational information

Regarding the sources of educational information about how to use new waste facilities responders gave different answers. Part of them pointed that they were taught by their children (who mainly live in different Estonian towns) how to sort the waste in a proper way:

“We have children in the towns. They have “waste houses” – so, they tell us how they sort paper, plastic, biodegradable waste. However it is not totally applicable for us because we throw away only that what is harmful to burn”.
/Female in 50s, Ac2/

„The only information that I heard regarding serious waste sorting went from my relatives from town: this – here, that – there, those brought there... They

wrote me a letter that something has been released, there is a need to do something – that is it “. /Female in 40s, Na3/

Moreover, some people pointed that they feel moral responsibility towards children to act in a correct way:

“They [children] even berate us if we put something in a wrong place: “Mom, dad, this should be put in the container, away”. Sometimes me and wife are not good in it. But when you are pointed from the side, you feel ashamed towards son or daughter that we are not tidy. And next time we will never do that again, that is it. Probably it works for every family: one from another”. /Male in 60s, LMb5/

People in Raja declared that they were not taught how to use new facilities. Nevertheless, they claim that it did not cause any problems for them. On the question how they understood how to use the containers, Old Believers answered:

“There is a small hall there [in the container for glass], only bottles can fit. It is like a big barrel and a roof – you cannot put there anything else.” /Female in 60s, JNa4/

One more responder from Raja mentioned that she got the information regarding appropriate types of waste for the containers from the sticker on the container. Information is written in Estonian language, however, since she speaks Estonian fluently it did not invoke any problems in understanding. She also pointed that there is a picture with acceptable types of waste that makes information intuitively understandable.

All responders also mentioned that they have heard some information on TV, radio and newspapers. Nevertheless, they cannot reproduce it and say in detail what it was said. Many of people concluded that understanding of how to sort the waste went to them itself.

Attitude towards social innovation

It can be clearly seen that all Old Believers have positive attitude to the new waste recollection system since it solved their problems (satisfied social need). Interestingly, that they associate those improvements rather with achievement of their parish than with the state (social relationships):

“Earlier everything was thrown into the lake. But now it is tidy there, everything is cleaned. Our parish did a good job. Our parish organized the order”. /Female in 60s, JNb4/

Totally all responders of the interviews complained that they met a problem of plastic utilization after the collapse of the USSR and new social innovation solved this problem. Plastic is seen is the main problem for Old Believers in the terms of waste build-up and its utilization.

Apart of plastic other types of waste polluted Old Believers' territories for decades. Old Believers remember the time when they could drink water from the lake and when the forests were clean. The things have been changed during the Soviet time and one day it became clear for Old Believers that they met a problem of environmental pollution. While some of them participated in that process since there were not legal appropriate ways for utilization the waste, they were not satisfied with that order of things and wished changes. While new waste recollection system did not solve old problems and polluted spots are still there, it provided clear solutions for prevention future pollutions.

Interesting insight was found regarding how Old Believers see EU in this process. Some responders mentioned that EU was a pushing force for Estonian government to implement new waste treatment system and they appreciate this contribution of EU. While in general Old Believers have negative attitude towards EU-membership, this fact they recognize as positive. One of the responders also provided extended information of how neighbouring countries impact Estonia in the environmental terms:

„Sometimes there were so powerful bonfires that Finland even sent a note when wind blew in Finnish side that black smoke when bonfires were burnt on Ivan Day. Therefore here locals have been warned: „Friends, do not do that. We are not praised for that. Of course, it was initiated from side – otherwise the bonfires would be burnt in the same way till now. However Swedes-Finns threatened us by „coin“ [here means “money”]: only if something happens – [you will get] fine for atmosphere pollution. [...] So, EU has impacted us“.
/Male in 60s, LMB4/

I also got a feeling that growing trend for cleanliness and sustainable development in the Europe impacted also Old Believers. This demand matched with introduction of new waste recollection system and that is why they met it as something needed and expected; the social innovation was not perceived as hostile or foreign there.

All in all, it can be concluded that Old Believers have experienced three waste utilization systems. They point improving tendency where new waste recollection system satisfies their needs.

3.2.3 Traditions related to the waste

In the previous subchapters essential waste utilization practices of Old Believers were considered, although they are also inherent for other rural cultures of Estonia. The focus of this subchapter that represents Research Question 3 is on religious and cultural traditions of Old Believers as a distinct group. In order to find the connections two questions regarding traditions and their reflection nowadays were asked.

Ivan Day and Maslenitsa

The observations of religion-related traditions brings us to celebrations of Ivan Day and Maslenitsa. The most common answer regarding the traditions that responders

mentioned was burning the waste at Ivan Day. The holiday is celebrated on the 7th of July and roots to pagans' traditions. With the acceptance of Christianity Ivan Day was linked to the birth of John the Baptist. Traditional way of celebration included many rites: swimming in a lake since it was believed that water at Ivan Day has magic healing properties; collecting special herbs that also according to the beliefs had healing and protecting value; divination on herbal wreath; etc.

Although, one of the essential parts of Ivan Day was burning the fires and jumping over them. It was believed that the higher people jump, the happier year they will have. Also young couples had a tradition to divine on Ivan Day: they had to keep hands of each other and jump over the fire. If while the jump their hands disunite, then they will not be together for a long time. Otherwise, they will marry and have long life together, especially if many sparks accompanied their jump. Ivan Day fire played also protecting role. Villagers punched livestock nearby the fire in order to prevent possible diseases and death. Mothers burnt clothes of their ill children in order to burn diseases together with clothes. And finally Ivan Day fires protected people from witches, werewolves, mermaids, sorcerers, brownies and wood goblins who were especially active on the 7th of July – the day of the shortest night.

Ivan Day is no longer perceived as a religious holiday, however, is still celebrated in Raja, Kolkja and Kasepaa as a cultural tradition. One of the responders emphasized that burning the fire is rather a way to utilize old waste than to pay tribute to the traditions. Being in the Kolkja municipality building I saw stands with photographs taken during the Ivan Day. By them I could understand that the village had quite big celebration with official speeches, concert and festivities organized by the municipality. Apart of that people burn own fires from the massive things that might be difficult to utilize in different way.

“We have a holiday – Ivan Day. If something is old – we just collect that and burn. We make a huge fire. [...] If we do a repair, remove wallpapers – also add them to that fire”. /Female in 40s, Na3/

“We have that high fire that it is impossible to jump over it. It is nearby every household. And branches, and trees that have been sawing, bushes, hay, if necessary. Everything is collected during the year – and then the fire kindles. We have a fire of this room size [the size of room was approximately 20 m²]. Because when grab everything together – and from the bank, and from the home, and from the yard, and from the garden...” /Female in 50s, LMa6/

Another time for burning the fires is Maslenitsa. This holiday is dedicated to end of winter and start of spring. It is celebrated in the last week before Great Lent, consequently, the dates are different every year (usually it is end of February – beginning of March).

“You can burn at Maslenitsa everything that you do not need anymore. At Maslenitsa we have one fire for the whole village, while at Ivan Day every households burns a fire”. /Female in 40s, Na4/

All in all, with the exception of Varnja Old Believers celebrate both Ivan Day and Maslenitsa. The municipality work on maintaining the ancient traditions while for people it is mostly a way to utilize volume waste.

Other traditions

Basically, Ivan Day and Maslenitsa were the only traditions mentioned by the responders themselves. In order to get more traditions and beliefs I provided an example of my family where we believe that it is not good to sweep after a guest left out home. I and asked interviewees to remind something from the same dimension. Usually they could not remind anything additionally, but they all asserted that they have the same tradition:

“If guest left – it is prohibited to sweep. Otherwise they will never come back. We sweep on the next day. It is said “to sweep guests out”. Another time,

especially in autumn, strong wind brings yellow leaves here, and on the porch, and on the track. And guests came and leave in the evening. But we have a habit: broom in hands and sweep until they have left”. /Female in 50s, LMa8/

“Yes, it is not good. When visitors leave, if they leave today, for instance, it is not good to clean at the same day, to sweep, etc. Then you sweep them out. Next day then...”. /Female in 60s, JNa9/

I should mention that one of the responders does not follow this tradition. By the way, she was the youngest among my interviewees:

“Is it possible not to sweep after the guests? I understand if you hosted one-two people, but when ten people come to your home – they will turn the house. Especially when there are children”. /Female in 40s, Na4/

One more belief that slipped past in one of the interviewee’s speech is ban for bringing anything out from the cemetery. The responder mentioned it asking my question regarding waste facilities in the village:

“It [the container] is the single one. For instance, to throw artificial flowers. It is said that nothing can be brought from the cemetery. Hereby, flowers, candles, other remains, pots – everything is taken there”. /Female in 50s, T7/

Thus, it is seen that ancient belief of Old Believers regarding prohibition of taken out things from the cemetery impacted location of the waste container: the single extra container apart of the main containers that are located next to the shop was put in the territory of the cemetery. I myself went to the cemetery and saw the container. It was located in the very end of the cemetery, but still inside its territory, very close to the fence. Nevertheless, a few meters behind the cemetery border I found a small dump of waste consisted mainly from old leaves, plastic bottles and cardboard boxes. Their origin left unknown. The cemetery itself was very clean and tidy.

Special place belongs to the tradition of re-usage. While in previous subchapter I described ways of materials' reusing, here I would like to stop on the traditionalistic part. Old Believers is a community that have never experienced high standard of living and I assume that may be the reason of their tradition to save and reuse materials. When one of the responder told me how she reuses plastic cups, I asked her if she would do that in a case she got extra money for special pots. This is what she replied:

“We would still use the plastic cups because it has come to us with the mother’s milk. And my children bring these plastic cups to me. Even bags from bread. And then we put to these bags beetroots, potato, pies and give them back” /Female in 50s, Ac4/.

However, this remark about economizing qualities of children contradicts to another interviewee who mentioned that his children do not behave as economizing and prefer to buy new thing instead of repairing broken ones. All in all, I believe that new generations are less thrifty than older people. Mainly it is related to availability of every needed goods and affordable price. Nevertheless, idea of re-usage is still alive among young generation, but it has rather habitual character than economical.

One more habit that rooted deeply in Old Believers' community is Saturday as a day for cleaning home. During week days people work and Sunday is a day for rest, working on Sunday is perceived as a sin. Thereby, people left Saturday for cleaning and bathing. The evening Saturday service in the church started at 4 pm that meant that people were supposed to clean the house and to have a bath till this time in order to be clean for praying. One of the responders narrated that her daughter moved to another village to study Estonian language. Next Saturday she called to the mother and being very astonished told her that people in that village heat the bath on Sunday. The daughter asked how normal it is to take the bath on Sunday. My interviewee replied to her that if she does not have a choice, then it is ok. Nevertheless the daughter said that she will not go to sauna on Sunday. My interviewee concluded:

“It went into her blood very deeply that Saturday is the day of cleaning and bathing. You must be clean by Sunday and with clean soul, clean body go to the praying house”. /Female in 60s, Nb5/

So, a few more habits were discovered, however they are not directly related to the new waste recollection system. The single extra waste container was located in the cemetery to get people opportunity to throw away waste within the territory of the cemetery, though. Nevertheless. A small dump still was found very close to that place and I guess that it might be there since early independence time.

Attitude towards cleanliness

In general I got an impression that Old Believers are concerned regarding environmental issues. Also I had a feeling that they are sincere to the respect of this topic and it was not just an attempt to make good impression. My feelings were confirmed by clean streets and yards in all the villages (Pic.10, 11). With the very rare exception of small garbage laying on the streets, generally the territory was very clean.

Nevertheless, small dumps were also found. In the current paragraph by the “dump” I mean territory with up to ten metres in length and width that includes collection of the small solid waste. As it was mentioned before, one of them was located next to the cemetery in Varnja. Other ones were located in the yards of the households where nobody lives anymore. I found there different types of waste from plastic bottles to kitchen appliances (Pic. 12). Nowadays Old Believers’ villages are becoming empty due to lack of job and migration of young generations to the towns. This is the reason of big number of empty houses. One more dump was found out of the Raja village.

Additionally I checked waste in the waste containers and boxes for hazardous waste and it was relevant.



Pic. 10. Clean streets in Varnja



Pic. 11. Tidy household in Varnja



Pic. 12. Dump in the household where nobody lives

Some of the responders emphasized their awareness to the respect of saving clean environment for future generations:

“Our people will not pour anything: neither oil, nor petrol, nor anything else. If you pour – and you, and your children will walk here?! [...] Because we have lived here for a long time. This is our land – and we want to save it.” /Ab4/

I guess that Old Believers are not acquainted with the ideas of sustainable development in detail, but even unconsciously they try to follow it.

Remarkable, that two of the interviewees used term „Mother-land“ (матушка-земля). I think by that they wanted to point their attitude towards Earth as to alive person towards whom they feel grateful and try to contribute in her wellbeing.

All in all, the reflection of the religious and cultural traditions of Old Believers were defined and described in the current subchapter. While some of them were told me by interviewees, some of them I found from my own observations or between the words of Old Believers. Comments regarding the connection between practices and traditions were provided in the text, however, some additional thoughts and speculations will be mentioned in the Discussions chapter.

CONCLUSIONS

The final goal of this MA thesis is to explain the dynamics of change in waste utilization practices among Old Believers' community that are related to new waste recollection system in Estonia. Social innovation theory and Practice theory have become a theoretical framework for the current investigation where first theory covers phenomenon of new waste recollection system and the second one is responsible for explanation of how the practice forms and changes. Finally three research questions were defined in order to discover the topic comprehensively. Interview and observation were chosen as methodological methods. All in all, six interviews with eleven people who represent nine families were conducted additionally to the interview with the Head of Peipsiaare municipality. In analysing part their answers together with my observation were considered and analysed in detail. The conclusion regarding the whole work will be provided in this chapter.

In order to find the change, I investigated what kind of waste utilization practices Old Believers had and how do they treat waste nowadays. Investigation revealed a number of practices and I chose among them the most essential ones since all existing practices related to the waste is impossible to describe within one Master Thesis. The results are represented in the Table 7 where I showed changes in three crucial elements of practice that were chosen in the theoretical part – Competence, Meaning and Products.

During the analysis three periods of waste management systems were defined: Soviet time, Early independence and EU-membership. These periods differ by facilities provided by the state, types and amount of waste, attitude towards environment and, as consequence, by different practices. Nevertheless, for the Table 7 I cut off extra information regarding evolution of practice in time and emphasize on practice change.

For this matter I make comparison in the dimension “Before” and “Nowadays”. If the element of practice has not been changed, in the Table it is marked as “-”.

Table 7. Changes of key waste utilization practices among rural Old Believers

Practices	Competence	Meaning	Products
Compos- ting	Separating biodegradable waste, collecting it separately in the bucket, putting on the pile	Fertilizer for field, getting rid of biodegradable waste, clean yard	Food remains, leaves, remains from field and garden, sank, peat, fence, place for pile
	-	-	-
Using the stove	Separating paper and cardboard, collecting them in the separate place, lightening	Lighting the fire, getting rid of paper	Stove, matches, all types of paper and cardboard
	-	-	Stove, matches, paper, cardboard, poorly burning paper
Utilizing old clothes	1. Gifting to others, church, orphanages 2. Using as rags 3. Burning	Getting rid of old clothes, helping others, economizing motivation	Old clothes, bed linen, curtains
	1. Gifting to others, church, orphanages 2. Using as rags 3. Burning 4. Throwing to the container	-	-
Burning bonfires	Separating materials, collecting in different places, making a pile, lightening the pile	Getting rid of waste, religious traditions (worship John the Baptist, cures diseases)	Place for fire, matches, branches, old furniture, old clothes, other volume waste
	-	Getting rid of waste, cultural traditions (from everlasting)	-
Utilizing metal	Collecting together with other waste, throwing somewhere to uncontrolled dump or to truck	Getting rid of metal	Tins
	1. Collecting together with	Getting rid of metal,	-

	other waste and throwing to the containers. 2. Collecting separately and selling (bringing to the towns)	collecting money	
Utilizing glass	1. Collecting together with other waste, throwing somewhere to uncontrolled dump or to truck. 2. Collecting separately, selling.	Getting rid of glass, collecting money	Jars, bottles
	1. Separating packaging glass, collecting together with other waste and throwing to the packaging container or to container for glass (Raja).	Getting rid of glass	-
Utilizing hazardous waste	Collecting together with other waste, throwing somewhere to uncontrolled dump or to truck	Getting rid of waste	Bulbs, batteries, expired medicine, dangerous household waste
	Collecting separately, throwing to special spots	Getting rid of waste, utilize waste in environmentally-friendly way	-
Reusing materials	Collecting reusable materials separately, using them in a new or old way	Economizing motivation	Jars, clothes, boxes
	-	Economizing, aesthetic motivations, resistance to growth of consumption	Jars, clothes, boxes, plastic cups, tires
Utilizing plastic	-	-	-
	Collecting together with other waste and throwing to the containers.	Getting rid of plastic	Packages from food, plastic bags
Using private container	-	-	-
	Sorting the waste, throwing waste to the containers	Getting rid of waste in environmentally-friendly way	Metal, glass, plastics, old clothes, etc.

	Before
	Nowadays

The analysis shows that the **most stable** practice is *composting*. It is the only practice that has not experienced any changes. The practice of *using the stove* that is directly related to the paper and cardboard utilization experienced **small changes** in Products element. Nowadays people obtain advertisement booklets quality of which is not appropriate for burning and consequently the practice demands more time. Those, who do not burn the booklets, experienced change in practice on the stage of sorting paper. For the practice of *old clothes utilization* people got the opportunity to throw it to the containers while three other methods of getting rid of it, Meaning and Products are still the same. One more stable practice among Old Believers community is *burning bonfires*. However, it has lost its religious constituent.

To the practices whose elements have been **changed considerably** belong *utilizing of metal* since nowadays Old Believers also consider metal from economic point of view and collect tins separately for selling. Regarding the *glass* the situation is opposite, since during the Soviet time Old Believers had the opportunity to sell glass bottles while now they do not. Remarkable, that practice of selling the glass does exist in Estonia within new waste recollection system, nevertheless it is not available in Old Believers villages. People from Raja have the opportunity to dispose bottles and jars to special container, though, that also impacts their practice of glass collection.

Changes happened in utilization of *hazardous waste*. First of all, people got the idea of importance to utilize such types of materials in environmental-friendly way that impact Old Believers to find ways for proper utilization. Social innovation contributed to this process, too, in the terms of facilities. While *reusing of materials* exists among Old Believers for ages as a practice-as-entity, it totally changes as practice-as-performance following the demand of time. Nevertheless, we cannot consider this practise as new.

And finally to **new practices** belong *plastic utilization* and *using of containers*. Formation of these practices started during the early independence period and shaped after the introduction of new waste recollection system.

DISCUSSIONS

Having started working on the current topic I had some preliminary expectation regarding the results, however, I did not try or aim to bind them with the obtained information. For instance, I expected to define two periods: before 2005 year and after, but in the process of analysing I realized that periods of Soviet and independent Estonia differ considerably and I have to describe them separately. Also before starting the research I planned to define two types of practices: old and new ones. However, in the end I got four types: new, slightly changed, considerably changed and totally new ones.

One more point that I expected to see brightly represented in the result was the connection between religious traditions of Old Believers and their waste utilization practices. Nevertheless, it has not happened. Even those rare practices with religious roots that exist nowadays, for instance, burning bonfires on Ivan Day and Maslenitsa, had lost their religious component. However, they acquired cultural meaning and today we can consider the practice of bonfires as part of Old Believers society.

I would point as an interesting finding also the fact that ancient waste utilization practices of Old Believers have become their cultural traditions. Indeed, many practices related to nature and waste rooted deeply in Old Believers culture. For instance, it is very natural for them to take nature's vegetation and give them back as a compost. Or to consume wood for the heating, but also get it back to the nature after burning as fertilizer. These interactions with nature have become cultural traditions of Old Believers and reflect their caring attitude towards their land and nature ("Mother-Earth"). So, while initially these practices aimed only rational goals, today we can consider them as a part of cultural heritage of Old Believers society.

Some assumptions concerning the results of the questionnaire “Me. The world. The media” made in subchapter 1.3 were proved, some were refuted and for some answers were not found. Thus, the assumption regarding the lack of sufficient amount of facilities in Northern-East is left without the answer. I requested this data from the Ministry of Environment, but did not get the answer. However, it is interesting that all responders said that they do not have difficulties with getting the facilities. With that I could assume that number of facilities is sufficient, but they also mentioned that it is true in the case of having a car. Otherwise distances to achieve the containers are quite long and are not bearable for many foot passengers. But if having the car is the decisive issue then it would be appropriate to compare number of cars between the regions. If the regions that showed better performance in the table of waste sorting indeed have bigger number of cars with the equal number of facilities and population, then the issue of cars would be reliable. Since I do not have this data, the assumption is neither proved, nor refuted.

The assumption that rural people estimated themselves more often as those who sort the waste in comparison with urban citizens since they might have own ways of sorting has been proved at least for the case of Old Believers. Indeed, people in the countryside get benefits from paper, cardboard, biodegradable and other types of the waste that can be reused and for this matter they sort it. Sorting the waste is rather new practice for urban citizens (with some exceptions) who even ten years ago did not have the idea to define among the waste different types. But for Old Believers sorting of biodegradable, paper, cardboard and some other types of waste is routine practice that they experience since their birth. Consequently, adaptation to new waste recollection system might take much less efforts from rural citizens in contrast with urban ones.

The assumption regarding lack of information in Russian language has been refuted since Old Believers claim that they got sufficient educational information from different sources. It was discovered that question of language also is not a problem for Old Believers. However assumption in respect of impact of cultural differences between Estonian- and Russian-speaking populations can be developed and elaborated in the

future studies since Old Believers identify themselves as a separate social group with different mentality and traditions that presumably might invoke the gap in waste practices.

It was found that waste utilization practices indeed are embedded in the context of other practices as it was argued by Gram-Hansen, Hargreaves and some other academics. To describe the full interconnection between all practices and to find how they impact each other is of high complexity, although it definitely deserves future studies. Regarding the topic of the current MA thesis I also found some interconnections. First of all, practices of volume waste and metal utilization are tightly connected with male practices to go to town by car for some matters. Interestingly, that while female Old Believers also can drive a car, nobody of them mentioned this practice as their responsibility. Gender distribution of waste utilization practices can be elaborated in the future. Another remarkable example of dependency between practices points on professional activities of individuals. For instance, businessmen who grow and sell the onion mentioned that when they drive a car or walk, they also look for nobody's boxes that they need for selling the onion.

Some findings really surprised me. For instance, the fact that there was no any centralized waste utilization system during the Soviet time at that region. It actually means that Old Believers were able to utilize themselves 100% of the waste that they generated. While some part of that belonged to not environmental-friendly ways, still I found this fact impressive and it made me think of how much we all are dependent on "achievement of civilization" nowadays.

Among the "achievement of civilization" many things can be listed, but it is interesting to consider those that were brought to Estonia with the membership in EU. Did the membership in EU brought to Old Believers waste treatment system problems, solutions or problems and solutions? While new market facilitated waste build up, the EU waste directives arranged its treatment. The study revealed that Estonian Old Believers embraced the new waste recollection system with great relish. However, should Old Believers take EU "solutions" with high gratitude or maybe it would be better initially

to avoid imposition of new types of waste, overconsumption and other consequences that went with new market? In reality Old Believers is the community that is not eager to consume goods indiscriminately, they have economizing constituent in their nature and cultural traditions, practice of reusing is one of the essential parts of their attitude towards the things. In fact Old Believers were embedded to this modern world of consumption without their own will. The change in market was indeed rapid and Old Believers only could adapt to it since they were not offered another options too choose.

While I assume that new market and consumerism with waste build up as a consequence were imposed to the Old Believers community and it is visible that they try to resist to it in a way they can, I argue that it brought some positive outcomes for their society as well. I assume that this culture of consumption might be one of the reasons of rising positive attitude and awareness towards environment, cleanliness and more aesthetic way of life in general that appeared among Old Believers community in recent years. However, obviously it cannot be the only reason and in future other reasons can be elaborated in order to understand what impacted changes in Old Believers life in the aesthetic dimension.

Interestingly, that even without conscious concern, modern Old Believers community follows the pattern of waste utilization introduced by scientists and politicians of EU. Connection between waste hierarchy released by EU (see p. 20) and views of Old Believers on the waste utilization is the next. Indeed, for the most part Old Believers still resist to overconsumption that reflects the first item in the hierarchy – *prevention*. Since reusing of materials is very common among Old Believers we also can refer to the next items of the hierarchy – *preparing for re-use and recycling*. Everything else that was not managed to be either prevented or reused is *disposed* in a legal way. Thus, while it is difficult to give accurate assessment of how much waste hierarchy is reflected in the Old Believers practices, definitely, the main pattern is noticeable.

It is interesting to analyse how much EU waste utilization pattern impacted Old Believers' one? This issue needs detail examination, but right now I can say that the process of new waste recollection system introduction has been implemented according

to the rules of social innovation and its stages (see p. 17) are reflected explicitly. Interestingly, that while social need was represented by the appearance of new types of waste and inability of locals to utilize them in an environmentally-friendly way, the main *Prompt and Inspiration* came from the EU side as a condition for membership. At the stage of *Proposal and Ideas* new legislation based on the EU directives has been applied. Implementation of the system in practice happened in 2005 and it represents the third stage – *Prototyping and Pilots*. After that, following the fourth stage, new waste recollection system has impacted old set of waste practices among Old Believers that refers to *Sustaining*. A room for development and system improvement in the social innovation stages is represented by *Scaling and Diffusion*. For the current case it refers to the discussion regarding lack of interest among municipalities to reduce the amount of waste, what to do with numerous buried dumps, how to increase number of people who sort the waste, etc. The final stage, *Systematic change* that assumes the systematic goal of social innovation is also visible. It is seen that the environmental awareness of Old Believers is growing. They express concerns towards nature and cleanliness and mention improvement in their own attitude towards them. This approach was proved during the observation since in general the villages, yards and houses look clean and tidy.

To sum up, the social innovation of the new waste recollection system implementation has been useful and consequently successful among rural Old Believers. While it did not impact some practices (e.g. utilization of paper, cardboard, biodegradable waste) it offered opportunities to utilize the new types of waste that did not exist in old times and the way for their disposal was not passed on to new generations. Old Believers themselves express strongly positive attitude towards the social innovation. Changes in waste utilization practices among rural Old Believers community invoked by new waste recollection system facilitated a significant step towards sustainable development in the region.

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APPENDICIES

Appendix 1. Questions for the interview with Old Believers

#	RUS	ENG
1	С каким мусором вы сталкиваетесь дома?	What types of waste do you have at home?
2	Что вы с ним делаете? Есть ли места сбора или утилизации мусора вне дома? Сжигаете ли вы мусор?	What do you do with it? Do you have spots for collection or utilization waste outside home? Do you burn the waste?
3	Почему вы поступаете с мусором именно так?	Why do you do that?
4	Какие средства утилизации мусора есть в вашем поселении? Как далеко они расположены от вашего дома? Какими из них вы пользуетесь, а какими – нет?	What facilities for waste utilization are available at your settlement? How far are they located from your house? Which of them do you use and which of them you do not?
5	Какие проблемы с утилизацией мусора в вашем поселении вы знаете? Можете вспомнить действия односельчан, связанные с мусором, которые вы не приветствуете? Есть ли вред от туристов и приезжих?	What problems with waste utilization do you know in your village? Can you name the deeds of your villagers that you do not appreciate? Is there any threat or harm from tourists or visitors?
6	Были ли изменения в процессе утилизации мусора за последние десятилетия? Расскажите обо всех типах мусора. Если изменения были, то когда и почему? Сталкивались ли вы со сложностями в этом процессе? Если да, с какими?	Whether there were any changes in the way you handle the waste in recent decades? Tell about all types of waste. If yes, then why and when? Have you met any obstacles? If yes, what kind of obstacles?
7	С какой информацией относительно утилизации мусора вы сталкивались?	What kind of information have you been given regarding waste treatment?

	Что являлось ключевым в этой информации? И каковы ее источники?	What was a message there? And what were the sources?
8	Что ваши предки делали с мусором? Были ли с этим связаны какие-то традиции или верования?	Do you know how your ancestries dealt with waste? Were there any specific traditions or believes?
9	Есть ли какие-то религиозные или культурные традиции, которые влияют на то, как вы утилизируете мусор?	Do you have any religious or cultural traditions that affect your waste treatment?

Appendix 2. Mapping of the waste facilities in four households

